Alexander Shnirman

List of Publications by Year
in descending order

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104 papers	6,481 citations	136950 32 h-index	62596 80 g-index
104 all docs	104 docs citations	104 times ranked	3506 citing authors

#	Article	IF	Citations
1	Current-phase relation in a topological Josephson junction: Andreev bands versus scattering states. Physical Review B, 2021, 103, .	3.2	2
2	Acoustic properties of metallic glasses at low temperatures: Tunneling systems and their dephasing. Physical Review B, 2021, 103, .	3.2	2
3	Microwave response of a chiral Majorana interferometer. Physical Review B, 2021, 104, .	3.2	1
4	Stabilization of Qubit Relaxation Rates by Frequency Modulation. Physical Review Applied, 2021, 16, .	3.8	2
5	Current noise geometrically generated by a driven magnet. Physical Review Research, 2020, 2, .	3.6	6
6	Thermally driven spin transfer torque system far from equilibrium: Enhancement of thermoelectric current via pumping current. Physical Review B, 2019, 99, .	3.2	4
7	Transport signatures of a Majorana qubit and read-out-induced dephasing. New Journal of Physics, 2019, 21, 043027.	2.9	11
8	Dynamical decoupling of quantum two-level systems by coherent multiple Landauâ€“Zener transitions. Npj Quantum Information, 2019, 5, .	6.7	15
9	Excess equilibrium noise in a topological SNS junction between chiral Majorana liquids. Physical Review B, 2018, 98, .	3.2	7
10	Dynamics of a Magnetic Needle Magnetometer: Sensitivity to Landau-Lifshitz-Gilbert Damping. Physical Review Letters, 2018, 121, 160801.	7.8	13
11	Strong nonequilibrium effects in spin-torque systems. Physical Review B, 2017, 95, .	3.2	12
12	Insulating Josephson Junction Chains as Pinned Luttinger Liquids. Physical Review Letters, 2017, 119, 167701.	7.8	44
13	Rabi noise spectroscopy of individual two-level tunneling defects. Physical Review B, 2017, 95, .	3.2	3
14	Analysis of the conditional average and conditional variance of dissipated energy in the driven spin-boson model. Physical Review B, 2017, 96, .	3.2	1
15	Thermoelectric transport in junctions of Majorana and Dirac channels. Physical Review B, 2017, 95, .	3.2	22
16	Decoherence spectroscopy with individual two-level tunneling defects. Scientific Reports, 2016, 6, 23786.	3.3	57
17	Decoherence of a quantum two-level system by spectral diffusion. Physical Review B, 2016, 93, .	3.2	12
18	Current-phase relation andh/e-periodic critical current of a chiral Josephson contact between one-dimensional Majorana modes. Physical Review B, 2016, 93, .	3.2	8

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19	Using Majorana spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml for the spin-boson model. Physical Review B, 2016, 93, .	3.2	6
20	One-dimensional Josephson junction arrays: Lifting the Coulomb blockade by depinning. Physical Review B, 2015, 92, .	3.2	25
21	Interacting two-level defects as sources of fluctuating high-frequency noise in superconducting circuits. Physical Review B, 2015, 92, .	3.2	90
22	Geometric Quantum Noise of Spin. Physical Review Letters, 2015, 114, 176806.	7.8	18
23	Majorana representation for dissipative spin systems. Annals of Physics, 2015, 361, 401-422.	2.8	23
24	Flux1/fÎ±noise in two-dimensional Heisenberg spin glasses: Effects of weak anisotropic interactions. Physical Review B, 2014, 90, .	3.2	16
25	Statistics of energy dissipation in a quantum dot operating in the cotunneling regime. Physical Review B, 2014, 90, .	3.2	2
26	Distribution of energy dissipated by a driven two-level system. Physical Review B, 2014, 90, .	3.2	9
27	Engineering and manipulating topological qubits in 1D quantum wires. Journal of the Korean Physical Society, 2013, 62, 1558-1563.	0.7	22
28	Magnetic Flux Noise in dc SQUIDs: Temperature and Geometry Dependence. Physical Review Letters, 2013, 110, 147002.	7.8	79
29	Calorimetric measurement of work in a quantum system. New Journal of Physics, 2013, 15, 115006.	2.9	88
30	Adiabatic pumping through an interacting quantum dot with spin-orbit coupling. Physical Review B, 2013, 87, .	3.2	12
31	Measuring fermion parity correlations and relaxation rates in one-dimensional topological superconducting wires. Physical Review B, 2013, 88, .	3.2	12
32	Lasing and transport in a coupled quantum dotâ€“resonator system. Physica Scripta, 2012, T151, 014032.	2.5	5
33	Correlation between lasing and transport properties in a quantum dot-resonator system. Journal of Physics: Conference Series, 2012, 400, 042025.	0.4	0
34	T1-echo sequence: Protecting the state of a qubit in the presence of coherent interaction. Physical Review A, 2012, 86, .	2.5	1
35	A quantum dot close to Stoner instability: The role of the Berry phase. Annals of Physics, 2012, 327, 2543-2559.	2.8	9
36	Strong Coupling of Spin Qubits to a Transmission Line Resonator. Physical Review Letters, 2012, 108, 190506.	7.8	65

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37	Lasing and transport in a quantum-dot resonator circuit. Physical Review B, 2011, 84, .	3.2	60
38	Charge solitons and their dynamical mass in one-dimensional arrays of Josephson junctions. Physical Review B, 2011, 83, .	3.2	10
39	Superconducting micromasers. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 444-448.	2.7	1
40	Rabi spectroscopy of a qubit-fluctuator system. Physical Review B, 2010, 81, .	3.2	32
41	Single-qubit lasing in the strong-coupling regime. Physical Review A, 2010, 82, .	2.5	27
42	Prediction of resonant all-electric spin pumping with spin-orbit coupling. Physical Review B, 2010, 82, .	3.2	10
43	Quantitative evaluation of defect-models in superconducting phase qubits. Applied Physics Letters, 2010, 97, .	3.3	29
44	Measuring the Temperature Dependence of Individual Two-Level Systems by Direct Coherent Control. Physical Review Letters, 2010, 105, 230504.	7.8	64
45	Josephson Qubits as Probes of 1/f Noise. Lecture Notes in Physics, 2010, , 75-85.	0.7	0
46	Spin density induced by electromagnetic waves in a two-dimensional electron gas with both Rashba and Dresselhaus spin-orbit coupling. Physical Review B, 2009, 79, .	3.2	5
47	Theory of small charge solitons in one-dimensional arrays of Josephson junctions. Physical Review B, 2009, 80, .	3.2	3
48	Phase diffusion and locking in single-qubit lasers. Physical Review A, 2009, 79, .	2.5	16
49	Relaxation of Josephson qubits due to strong coupling to two-level systems. Physical Review B, 2009, 80, .	3.2	21
50	Few-qubit lasing in circuit QED. Physica Scripta, 2009, T137, 014016.	2.5	22
51	Single-Qubit Lasing and Cooling at the Rabi Frequency. Physical Review Letters, 2008, 100, 037003.	7.8	100
52	Sisyphus cooling and amplification by a superconducting qubit. Nature Physics, 2008, 4, 612-616.	16.7	105
53	Geometric phases in semiconductor spin qubits: Manipulations and decoherence. Physical Review B, 2008, 77, .	3.2	36
54	Decoherence and Relaxation in Driven Circuit QED Systems. , 2008, , .		1

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55	Dissipation in circuit quantum electrodynamics: lasing and cooling of a low-frequency oscillator. New Journal of Physics, 2008, 10, 095018.	2.9	43
56	Towards a Dephasing Diode: Asymmetric and Geometric Dephasing. Physical Review Letters, 2008, 100, 126806.	7.8	6
57	Photon-Number Squeezing in Circuit Quantum Electrodynamics. Physical Review Letters, 2008, 101, 147001.	7.8	28
58	Design of a ballistic fluxon qubit readout. Superconductor Science and Technology, 2007, 20, S450-S454.	3.5	32
59	Spin-density induced by electromagnetic wave in two-dimensional electron gas. Europhysics Letters, 2007, 78, 27001.	2.0	10
60	Reading out the state of a flux qubit by Josephson transmission line solitons. Physical Review B, 2007, 75, .	3.2	44
61	Stability of longitudinal coupling for Josephson charge qubits. Physical Review B, 2007, 76, .	3.2	2
62	Spin dephasing due to a random Berry phase. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 40, 76-83.	2.7	5
63	1/f NOISE AND TWO-LEVEL SYSTEMS IN JOSEPHSON QUBITS. , 2007, , 343-356.		5
64	Geometrical Spin Dephasing in Quantum Dots. Physical Review Letters, 2006, 97, 076803.	7.8	54
65	Decoherence from ensembles of two-level fluctuators. New Journal of Physics, 2006, 8, 1-1.	2.9	305
66	Tunable coupling of qubits: Nonadiabatic corrections. Europhysics Letters, 2006, 74, 1088-1094.	2.0	20
67	EFFECTS OF A SINGLE QUANTUM SPIN ON JOSEPHSON OSCILLATIONS. International Journal of Modern Physics B, 2006, 20, 2779-2784.	2.0	0
68	Berry phase in the presence of external noise. AIP Conference Proceedings, 2005, , .	0.4	0
69	Spin and spin-wave dynamics in Josephson junctions. Physical Review B, 2005, 71, .	3.2	48
70	Low- and High-Frequency Noise from Coherent Two-Level Systems. Physical Review Letters, 2005, 94, 127002.	7.8	146
71	Tunneling Spectroscopy of Two-Level Systems Inside a Josephson Junction. Physical Review Letters, 2005, 95, 127002.	7.8	40
72	Geometric Nature of the Environment-Induced Berry Phase and Geometric Dephasing. Physical Review Letters, 2005, 94, 070407.	7.8	105

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73	Output spectrum of a measuring device at arbitrary voltage and temperature. Europhysics Letters, 2004, 67, 840-846.	2.0	24
74	Cavity quantum electrodynamics in superconducting circuits:â€ƒSusceptibility at elevated temperatures. Physical Review B, 2004, 70, .	3.2	30
75	Dephasing of Solid-State Qubits at Optimal Points. Physical Review Letters, 2004, 92, 178301.	7.8	133
76	Nondemolition Measurements of a Single Quantum Spin using Josephson Oscillations. Physical Review Letters, 2004, 92, 177001.	7.8	19
77	The qubit and the cavity. Nature, 2004, 431, 138-139.	27.8	7
78	Novel Spin Dynamics in a Josephson Junction. Physical Review Letters, 2004, 92, 107001.	7.8	78
79	Dissipative effects in Josephson qubits. Chemical Physics, 2004, 296, 315-324.	1.9	37
80	Ground-state cooling of mechanical resonators. Physical Review B, 2004, 69, .	3.2	157
81	Spin-Spin Correlators in the Majorana Representation. Physical Review Letters, 2003, 91, 207204.	7.8	47
82	Noise and Decoherence in Quantum Two-Level Systems. Physica Scripta, 2002, T102, 147.	2.5	131
83	Josephson quantum bits in the flux regime. Physica C: Superconductivity and Its Applications, 2002, 368, 276-283.	1.2	11
84	Quantum Measurements of Charge and Flux Qubits. , 2002, , 353-363.		1
85	Quantum-state engineering with Josephson-junction devices. Reviews of Modern Physics, 2001, 73, 357-400.	45.6	2,201
86	Nanoscale superconducting quantum bits. Physica C: Superconductivity and Its Applications, 2001, 350, 161-165.	1.2	0
87	Reading-out the state of a qubit: an analysis of the quantum measurement process. Physica C: Superconductivity and Its Applications, 2001, 352, 113-119.	1.2	2
88	Josephson-Junction Qubits. Fortschritte Der Physik, 2000, 48, 1043-1054.	4.4	9
89	Josephson junction quantum logic gates. Computer Physics Communications, 2000, 127, 156-164.	7.5	5
90	Josephson junction quantum bits and logic gates. Physica B: Condensed Matter, 2000, 280, 410-411.	2.7	2

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91	Nano-Electronic Realizations of Quantum Bits. Journal of Low Temperature Physics, 2000, 118, 751-763.	1.4	14
92	Josephson Junction based Quantum Computing. Applicable Algebra in Engineering, Communications and Computing, 2000, 10, 375-382.	0.5	1
93	Statistics and Noise in a Quantum Measurement Process. Physical Review Letters, 2000, 85, 4578-4581.	7.8	79
94	Low-Energy Quasiparticle States near Extended Scatterers ind-Wave Superconductors and Their Connection with SUSY Quantum Mechanics. Physical Review Letters, 1999, 83, 5571-5574.	7.8	37
95	Resonant states and order-parameter suppression near pointlike impurities ind-wave superconductors. Physical Review B, 1999, 60, 7517-7522.	3.2	23
96	Entropy revisited: the plausible role of gravitation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 256, 369-374.	2.1	2
97	Josephson-junction qubits with controlled couplings. Nature, 1999, 398, 305-307.	27.8	614
98	Quantum measurements performed with a single-electron transistor. Physical Review B, 1998, 57, 15400-15407.	3.2	141
99	Quantum Manipulations of Small Josephson Junctions. Physical Review Letters, 1997, 79, 2371-2374.	7.8	444
100	Tunneling and resonant tunneling of fluxons in a long Josephson junction. Physical Review B, 1997, 56, 14677-14685.	3.2	35
101	Interference and transmission of quantum fluxons through a Josephson ring. Physical Review A, 1995, 52, 3541-3545.	2.5	6
102	Dephasing Length and Coherence of a Quantum Soliton in an Ideal Long Josephson Junction. Physical Review Letters, 1995, 74, 4915-4918.	7.8	15
103	Fluxon-density waves in a modulated Josephson ring. Physical Review B, 1994, 50, 12793-12801.	3.2	5
104	Nonperturbative studies of a quantum higher-order nonlinear SchrÃ¶dinger model using the Bethe ansatz. Physical Review A, 1994, 50, 3453-3463.	2.5	29