

# Yuri Galperin

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

132 papers	2,555 citations	26 h-index	45 g-index
145 ext. papers	2,816 ext. citations	3.8 avg, IF	4.92 L-index

#	Paper	IF	Citations
132	1/f noise: Implications for solid-state quantum information. <i>Reviews of Modern Physics</i> , <b>2014</b> , 86, 361-418	10.5	279
131	Non-Gaussian low-frequency noise as a source of qubit decoherence. <i>Physical Review Letters</i> , <b>2006</b> , 96, 097009	7.4	118
130	Dendritic and uniform flux jumps in superconducting films. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	107
129	Decoherence in qubits due to low-frequency noise. <i>New Journal of Physics</i> , <b>2009</b> , 11, 025002	2.9	101
128	Onset of dendritic flux avalanches in superconducting films. <i>Physical Review Letters</i> , <b>2006</b> , 97, 077002	7.4	96
127	Direct generation of charge carriers in c-Si solar cells due to embedded nanoparticles. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 093713	2.5	84
126	Dendritic flux patterns in MgB <sub>2</sub> films. <i>Superconductor Science and Technology</i> , <b>2001</b> , 14, 726-728	3.1	76
125	Finger patterns produced by thermomagnetic instability in superconductors. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	71
124	Thin superconducting disk with field-dependent critical current: Magnetization and ac susceptibilities. <i>Physical Review B</i> , <b>2000</b> , 61, 9699-9706	3.3	56
123	Dynamics and morphology of dendritic flux avalanches in superconducting films. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	49
122	Dramatic role of critical current anisotropy on flux avalanches in MgB <sub>2</sub> films. <i>Physical Review Letters</i> , <b>2007</b> , 98, 117001	7.4	49
121	Models of environment and T <sub>1</sub> relaxation in Josephson charge qubits. <i>Physical Review Letters</i> , <b>2005</b> , 95, 046805	7.4	49
120	Coherent transfer of Cooper pairs by a movable grain. <i>Nature</i> , <b>2001</b> , 411, 454-7	50.4	48
119	Relaxation of transport current distribution in a YBaCuO strip studied by magneto-optical imaging. <i>Superconductor Science and Technology</i> , <b>2002</b> , 15, 82-89	3.1	48
118	Thin superconducting disk with B-dependent J <sub>c</sub> : Flux and current distributions. <i>Physical Review B</i> , <b>1999</b> , 60, 13112-13118	3.3	47
117	Kondo temperature for the two-channel Kondo models of tunneling centers. <i>Physical Review Letters</i> , <b>2001</b> , 86, 2629-32	7.4	45
116	Central Peak Position in Magnetization Loops of High- T <sub>c</sub> Superconductors. <i>Physical Review Letters</i> , <b>1999</b> , 82, 2947-2950	7.4	42

115	Decoherence of a qubit by non-Gaussian noise at an arbitrary working point. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	40
114	Superconducting trapped-field magnets: Temperature and field distributions during pulsed-field activation. <i>Journal of Applied Physics</i> , <b>2002</b> , 92, 6235-6240	2.5	40
113	Magneto-optical study of magnetic-flux penetration into a current-carrying high-temperature-superconductor strip. <i>Physical Review B</i> , <b>1999</b> , 59, 9655-9664	3.3	40
112	Many electron theory of 1/f noise in hopping conductivity. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	38
111	Lightning in superconductors. <i>Scientific Reports</i> , <b>2012</b> , 2, 886	4.9	37
110	Size of flux jumps in superconducting films. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	36
109	Decoherence of a qubit due to either a quantum fluctuator, or classical telegraph noise. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	34
108	Heat transport in ultrathin dielectric membranes and bridges. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	34
107	Nonlocal electrodynamics of normal and superconducting films. <i>New Journal of Physics</i> , <b>2013</b> , 15, 093001.9	1.9	33
106	Flux distribution in superconducting films with holes. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	26
105	Nanomechanical Shuttle Transfer of Electrons. <i>Journal of Computational and Theoretical Nanoscience</i> , <b>2007</b> , 4, 860-895	0.3	24
104	Non-Gaussian dephasing in flux qubits due to 1/f noise. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	22
103	Orbital ac spin-Hall effect in the hopping regime. <i>Physical Review Letters</i> , <b>2005</b> , 95, 086603	7.4	22
102	Quantized acoustoelectric current in a finite-length ballistic quantum channel: The noise spectrum. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	22
101	Magnetic-field effects in energy relaxation mediated by Kondo impurities in mesoscopic wires. <i>Physical Review B</i> , <b>2002</b> , 66,	3.3	22
100	Rabi oscillations of a qubit coupled to a two-level system. <i>Europhysics Letters</i> , <b>2005</b> , 71, 21-27	1.6	21
99	Ray optics behavior of flux avalanche propagation in superconducting films. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	20
98	Theory of thermoelectric phenomena in superconductors. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	20

97	Interaction of two-level systems in amorphous materials with arbitrary phonon fields. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	19
96	Experimental tests for the relevance of two-level systems for electron dephasing. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	19
95	Nanosecond voltage pulses from dendritic flux avalanches in superconducting NbN films. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 022601	3.4	17
94	Flux avalanches triggered by microwave depinning of magnetic vortices in Pb superconducting films. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	17
93	Temperature dependence of filament-coupling in Bi-2223 tapes: magneto-optical study. <i>Superconductor Science and Technology</i> , <b>2000</b> , 13, 183-186	3.1	17
92	Oscillatory regimes of the thermomagnetic instability in superconducting films. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	16
91	Finite-Size Bath in Qubit Thermodynamics. <i>Journal of Low Temperature Physics</i> , <b>2016</b> , 184, 1015-1029	1.3	16
90	Nucleation and propagation of thermomagnetic avalanches in thin-film superconductors (Review Article). <i>Low Temperature Physics</i> , <b>2018</b> , 44, 460-476	0.7	16
89	Exact asymptotic behavior of magnetic stripe domain arrays. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	16
88	Flux penetration in a superconducting strip with an edge indentation. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	16
87	Information flow and optimal protocol for a Maxwell-demon single-electron pump. <i>Physical Review E</i> , <b>2013</b> , 88, 062139	2.4	15
86	Mechanical Cooper pair transportation as a source of long-distance superconducting phase coherence. <i>Physical Review Letters</i> , <b>2002</b> , 89, 277002	7.4	15
85	Thermally Driven Inhibition of Superconducting Vortex Avalanches. <i>Physical Review Applied</i> , <b>2017</b> , 8,	4.3	14
84	Conducting properties of In <sub>2</sub> O <sub>3</sub> :Sn thin films at low temperatures. <i>Applied Physics A: Materials Science and Processing</i> , <b>2014</b> , 114, 957-964	2.6	14
83	Dendritic flux avalanches in superconducting films. <i>Low Temperature Physics</i> , <b>2009</b> , 35, 619-626	0.7	14
82	Statistics of deep energy states in Coulomb glasses. <i>Physical Review Letters</i> , <b>2007</b> , 98, 196401	7.4	14
81	Interaction between superconducting vortices and a Bloch wall in ferrite garnet films. <i>Physical Review Letters</i> , <b>2007</b> , 98, 117002	7.4	14
80	The diversity of flux avalanche patterns in superconducting films. <i>Superconductor Science and Technology</i> , <b>2013</b> , 26, 055012	3.1	13

79	Memory effects in transport through a hopping insulator: Understanding two-dip experiments. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	13
78	Scaling and exact solutions for the flux creep problem in a slab superconductor. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	13
77	Possible weak temperature dependence of electron dephasing. <i>Physical Review B</i> , <b>2002</b> , 66,	3.3	13
76	Quantization of entropy in a quasi-two-dimensional electron gas. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	12
75	Nonlinearly driven Landau-Zener transition in a qubit with telegraph noise. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	12
74	Interaction of Lamb modes with two-level systems in amorphous nanoscopic membranes. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	12
73	Inductive braking of thermomagnetic avalanches in superconducting films. <i>Superconductor Science and Technology</i> , <b>2014</b> , 27, 055014	3.1	11
72	The Thermomagnetic Instability in Superconducting Films with Adjacent Metal Layer. <i>Journal of Low Temperature Physics</i> , <b>2013</b> , 173, 303-326	1.3	10
71	The Coulomb gap and low energy statistics for Coulomb glasses. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2008</b> , 2008, P06006	1.9	10
70	Low-frequency noise in tunneling through a single spin. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	10
69	Dephasing and dissipation in qubit thermodynamics. <i>Physical Review E</i> , <b>2015</b> , 91, 062109	2.4	9
68	Acoustoconductance in a nonuniform quantum channel. <i>Physical Review B</i> , <b>1997</b> , 56, 15299-15305	3.3	9
67	Low-Frequency Noise as a Source of Dephasing of a Qubit. <i>NATO Science Series Series II, Mathematics, Physics and Chemistry</i> , <b>2004</b> , 141-165		9
66	Electromagnetic radiation detectors based on Josephson junctions: Effective Hamiltonian. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	8
65	Thermo-magnetic stability of superconducting films controlled by nano-morphology. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 252601	3.4	8
64	Coulomb glasses: A comparison between mean field and Monte Carlo results. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	8
63	Logarithmic relaxation and stress aging in the electron glass. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	8
62	Importance of level statistics in the decoherence of a central spin due to a spin environment. <i>Physical Review A</i> , <b>2012</b> , 85,	2.6	8

61	Slow relaxation of conductance of amorphous hopping insulators. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 244135	1.8	8
60	Loss of quantum coherence due to nonstationary glass fluctuations. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	8
59	Metal frame as local protection of superconducting films from thermomagnetic avalanches. <i>AIP Advances</i> , <b>2016</b> , 6, 035304	1.5	8
58	Nonequilibrium electrons in tunnel structures under high-voltage injection. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	7
57	Effects of external driving on the coherence time of a Josephson junction qubit in a bath of two-level fluctuators. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	7
56	Quasi-One-Dimensional Intermittent Flux Behavior in Superconducting Films. <i>Physical Review X</i> , <b>2012</b> , 2,	9.1	7
55	Energy fluctuations of a finite free-electron Fermi gas. <i>Physical Review E</i> , <b>2016</b> , 94, 022123	2.4	6
54	Contactless measurement of alternating current conductance in quantum Hall structures. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 154309	2.5	6
53	Many electron theory of $1/f$ -noise in hopping conductivity. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2008</b> , 5, 800-808		6
52	Dephasing rate in metals versus diffusion constant. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	6
51	Spatially resolved studies of chemical composition, critical temperature, and critical current density of a YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> thin film. <i>Journal of Applied Physics</i> , <b>1998</b> , 84, 5089-5096	2.5	6
50	Universality of AC conductance in human hair. <i>Biomedical Physics and Engineering Express</i> , <b>2016</b> , 2, 027002	2.5	5
49	Charge transport through weakly open one-dimensional quantum wires. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	5
48	Bloch-sphere approach to correlated noise in coupled qubits. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2012</b> , 45, 455302	2	5
47	Magnetotransport in low-density pBi <sub>2</sub> Se <sub>3</sub> heterostructures: From metal through hopping insulator to Wigner glass. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	5
46	Calculation of the heat capacity of a thin membrane at very low temperature. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	5
45	Impurity-induced dephasing of Andreev states. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	5
44	Melting of Wigner crystal in high-mobility n-GaAs/AlGaAs heterostructures at filling factors 0.18> $\nu$ >0.125: Acoustic studies. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	5

43	Cooling by heating: Restoration of the third law of thermodynamics. <i>Physical Review E</i> , <b>2016</b> , 93, 032102.4	4
42	Crossover between localized states and pinned Wigner crystal in high-mobility n-GaAs/AlGaAs heterostructures near filling factor $\nu=1$ . <i>Physical Review B</i> , <b>2015</b> , 92,	3.3 4
41	Charge transfer between a superconductor and a hopping insulator. <i>Physical Review Letters</i> , <b>2006</b> , 96, 107004	7.4 4
40	The tensor of interaction of a two-level system with an arbitrary strain field. <i>Journal of Physics: Conference Series</i> , <b>2007</b> , 92, 012133	0.3 4
39	Fluctuations of the Fermi condensate in ideal gases. <i>Journal of Physics A</i> , <b>2005</b> , 38, 9405-9413	4
38	Symmetry of the remanent-state flux distribution in superconducting thin strips: Probing the critical state. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3 4
37	Phonon generation by current-carrying nanostructures. <i>Physical Review B</i> , <b>1999</b> , 59, 2833-2840	3.3 4
36	Entropy Signatures of Topological Phase Transitions. <i>Journal of Experimental and Theoretical Physics</i> , <b>2018</b> , 127, 958-983	1 4
35	Anisotropic Flux Penetration in Superconducting Nb Films With Frozen-in In-plane Magnetic Fields. <i>IEEE Transactions on Applied Superconductivity</i> , <b>2019</b> , 29, 1-5	1.8 3
34	Conductance through chains of Ge/Si quantum dots: Crossover from one-dimensional to quasi-one-dimensional hopping. <i>JETP Letters</i> , <b>2015</b> , 101, 22-26	1.2 3
33	Slow relaxation of magnetoresistance in AlGaAs-GaAs quantum well structures quenched in a magnetic field. <i>Journal of Physics Condensed Matter</i> , <b>2010</b> , 22, 405301	1.8 3
32	Spontaneous current generation in gated nanostructures. <i>Europhysics Letters</i> , <b>2005</b> , 71, 658-664	1.6 3
31	Acoustoelectric current for composite fermions. <i>Physical Review B</i> , <b>2001</b> , 64,	3.3 3
30	Giant Nonlinear Absorption by an Ensemble of Metallic Grains. <i>Foundations of Physics</i> , <b>2000</b> , 30, 2135-2150.	3
29	Nonlinear acoustic and microwave absorption in disordered semiconductors. <i>Physical Review B</i> , <b>2000</b> , 62, 16624-16631	3.3 3
28	Active control of thermomagnetic avalanches in superconducting Nb films with tunable anisotropy. <i>Superconductor Science and Technology</i> , <b>2018</b> , 31, 115009	3.1 3
27	Electron Concentration Profiles in Modulation Doped Structures With Wide Quantum Well. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2017</b> , 14, 1700190	3
26	Crossover temperature in electron-phonon heat exchange in layered nanostructures. <i>Physica Scripta</i> , <b>2019</b> , 94, 105704	2.6 2

25	Universal behavior of magnetoresistance in quantum dot arrays with different degrees of disorder. <i>Journal of Physics Condensed Matter</i> , <b>2013</b> , 25, 505801	1.8	2
24	Influence of measurement error on Maxwell's demon. <i>Physical Review E</i> , <b>2017</b> , 95, 062129	2.4	2
23	Intermittent Flux Penetration at Different Temperatures in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> on NdGaO <sub>3</sub> Substrates. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2011</b> , 24, 179-181	1.5	2
22	Giant oscillations of the acoustoelectric current in a quantum channel. <i>Physica Scripta</i> , <b>1997</b> , T69, 302-305.	2.6	2
21	Anomalous electron transport in doped uncompensated p-GaAs/AlGaAs quantum wells: evidence of virtual Anderson transition. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 395216	1.8	2
20	Nonlinear absorption of surface acoustic waves by composite fermions. <i>Europhysics Letters</i> , <b>2001</b> , 54, 661-667	1.6	2
19	Universal scaling form of AC response in variable range hopping <b>2014</b> ,		1
18	Wigner glass formation in 2DHG of p-Si/SiGe by high magnetic fields. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 150, 022010	0.3	1
17	Point-contact spectroscopy of hopping transport: Effects of a magnetic field. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	1
16	DX-centers and long-term effects in the high-frequency hopping conductance in Si-doped GaAs/Al <sub>0.3</sub> Ga <sub>0.7</sub> As heterostructures in the quantum Hall regime: acoustical studies. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2003</b> , 17, 276-279	3	1
15	Microwave-Activated Quantum Interferometer in an Environment. <i>Journal of Low Temperature Physics</i> , <b>2000</b> , 118, 579-588	1.3	1
14	Magneto-Optical Imaging of Superconducting Vortices <b>2004</b> , 53-60		1
13	Coulomb Drag in Mesoscopic Hopping Insulators. <i>Journal of Low Temperature Physics</i> , <b>2020</b> , 198, 209-223.	3	1
12	Proposed Model of the Giant Thermal Hall Effect in Two-Dimensional Superconductors: An Extension to the Superconducting Fluctuation Regime. <i>Physical Review Letters</i> , <b>2020</b> , 125, 217005	7.4	1
11	Concise guide for electronic topological transitions. <i>Low Temperature Physics</i> , <b>2021</b> , 47, 672-683	0.7	1
10	Nature of localized states in two-dimensional electron systems in the quantum Hall regime: Acoustic studies. <i>Low Temperature Physics</i> , <b>2017</b> , 43, 86-94	0.7	0
9	Low-Temperature Magnetic Properties of Superconducting Indium Nanocomposites in Opal Matrix. <i>Journal of Experimental and Theoretical Physics</i> , <b>2019</b> , 128, 761-766	1	0
8	Low-temperature conductance mechanisms in p-Si/SiGe heterostructures in high magnetic fields. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2008</b> , 5, 829-834		



- 7 Phonon-electric effect in nano-scale transistors. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2005**, 2, 3047-3050
- 6 Nonlinear absorption of surface acoustic waves by composite fermions. *Nanotechnology*, **2001**, 12, 610-614
- 5 Magnetic behavior of thin Superconducting disks with a field-Dependent Critical Current **2000**, 416-418
- 4 Granularity and the central peak in magnetization loops of thin Superconductors **2000**, 332-334
- 3 Possible weak temperature dependence of electron dephasing **2003**, 259-268
- 2 Temperature dependence of the microwave dielectric properties of [Formula: see text]-aminobutyric acid. *Scientific Reports*, **2021**, 11, 18082 4.9
- 1 Effect of the strong electron correlations on the formation of Wigner crystal in n-GaAs/AlGaAs structure: Surface Acoustic Waves studies. *Journal of Physics: Conference Series*, **2022**, 2164, 012021 0.3