

Igor V Lerner

List of Publications by Year in descending order

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84
papers

1,662
citations

304743

22
h-index

302126

39
g-index

84
all docs

84
docs citations

84
times ranked

959
citing authors

#	ARTICLE	IF	CITATIONS
1	Universal spectral correlations at the mobility edge. Physical Review Letters, 1994, 72, 888-891.	7.8	141
2	Spectral rigidity and eigenfunction correlations at the Anderson transition. JETP Letters, 1996, 64, 386-392.	1.4	100
3	Random walks in media with constrained disorder. Journal of Physics A, 1985, 18, L703-L707.	1.6	74
4	Random Walks through the Ensemble: Linking Spectral Statistics with Wave-Function Correlations in Disordered Metals. Physical Review Letters, 1996, 77, 554-557.	7.8	73
5	Jumps in Current-Voltage Characteristics in Disordered Films. Physical Review Letters, 2009, 102, 176803.	7.8	70
6	Spectral Correlations in Disordered Electronic Systems: Crossover from Metal to Insulator Regime. Physical Review Letters, 1995, 74, 1174-1177.	7.8	68
7	Applicability of scaling description to the distribution of mesoscopic fluctuations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 134, 488-492.	2.1	67
8	Distribution functions of current density and local density of states in disordered quantum conductors. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 133, 253-259.	2.1	65
9	Mesoscopic conductance fluctuations in graphene. Solid State Communications, 2009, 149, 1041-1045.	1.9	47
10	Low-temperature decoherence of qubit coupled to background charges. Physical Review B, 2005, 72, .	3.2	46
11	Level Correlations Driven by Weak Localization in 2D Systems. Physical Review Letters, 1995, 74, 2563-2566.	7.8	45
12	Functional integral bosonization for an impurity in a Luttinger liquid. Physical Review B, 2004, 69, .	3.2	43
13	Anomalous dimensions of high gradient operators in the extended nonlinear $\tilde{\rho}$ model and distribution of mesoscopic fluctuations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 134, 245-252.	2.1	41
14	Quantum Transport Thermometry for Electrons in Graphene. Physical Review Letters, 2009, 102, 066801.	7.8	38
15	Nonperturbative results for level correlations from the replica nonlinear $\tilde{\rho}$ model. Physical Review B, 1999, 60, 3955-3962.	3.2	37
16	Quantum Wire Hybridized With a Single-Level Impurity. Physical Review Letters, 2008, 100, 256805.	7.8	34
17	Phase transitions in two-dimensional electron-hole systems in high magnetic fields. Journal of Low Temperature Physics, 1980, 38, 333-352.	1.4	32
18	Anderson orthogonality catastrophe in disordered systems. Physical Review B, 2002, 65, .	3.2	32

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19	Magnetic-Field Dependence of the Localization Length in Anderson Insulators. Europhysics Letters, 1995, 29, 49-54.	2.0	30
20	The Einstein relation and exact Gell-Mann-Low function for random walks in media with random drifts. Physics Letters, Section A: General, Atomic and Solid State Physics, 1986, 119, 203-206.	2.1	29
21	Spectral statistics in disordered metals: A trajectories approach. Physical Review B, 1998, 58, 10343-10350.	3.2	23
22	Decoherence of charge qubit coupled to interacting background charges. Physical Review B, 2010, 81, .	3.2	23
23	Instability of the scaling theory of 2-d localization. Solid State Communications, 1984, 52, 593-598.	1.9	22
24	Deviations from the Gaussian distribution of mesoscopic conductance fluctuations. Physical Review B, 1997, 55, 4710-4716.	3.2	22
25	Dependence of the Ruderman-Kittel-Kasuya-Yosida interaction on nonmagnetic disorder. Physical Review B, 1993, 48, 9462-9477.	3.2	21
26	Effective plasma model for the level correlations at the mobility edge. Journal of Physics A, 1995, 28, 3623-3640.	1.6	21
27	Weak-localization effects in a resonant-tunneling junction. Physical Review B, 1992, 45, 14036-14041.	3.2	20
28	Delocalization in an Open One-Dimensional Chain in an Imaginary Vector Potential. Physical Review Letters, 1999, 82, 5080-5083.	7.8	20
29	Two-dimensional electron-hole liquid in the strong magnetic field. Solid State Communications, 1977, 23, 453-458.	1.9	19
30	Fluctuation Spectroscopy of Granularity in Superconducting Structures. Physical Review Letters, 2008, 100, 117003.	7.8	19
31	Fictitious level dynamics: A novel approach to spectral statistics in disordered conductors. Journal of Mathematical Physics, 1996, 37, 5061-5086.	1.1	18
32	Tunnelling density of states at Coulomb-blockade peaks. Europhysics Letters, 2006, 76, 109-114.	2.0	18
33	Nonlinear σ model for disordered superconductors. Physical Review B, 2001, 63, .	3.2	16
34	One-Dimensional Transport of Bosons between Weakly Linked Reservoirs. Physical Review Letters, 2014, 112, 100601.	7.8	16
35	On the possibility of photon localization in doped semiconductors near excitonic resonances. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 125, 435-440.	2.1	15
36	Duality of Weak and Strong Scatterer in a Luttinger Liquid Coupled to Massless Bosons. Physical Review Letters, 2013, 110, 136405.	7.8	15

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37	Can the trace formula describe weak localization?. Waves in Random and Complex Media, 1999, 9, 179-200.	1.5	14
38	High-gradient operators of the unitary matrix-model. European Physical Journal B, 1990, 81, 95-97.	1.5	12
39	Distributions of the diffusion coefficient for the quantum and classical diffusion in disordered media. Nuclear Physics A, 1993, 560, 274-292.	1.5	11
40	Mesoscopic conductance fluctuations in dirty quantum dots with single channel leads. Journal of Physics Condensed Matter, 1996, 8, 6719-6728.	1.8	11
41	Applicability of the ergodicity hypothesis to mesoscopic fluctuations. Physical Review B, 2003, 68, .	3.2	11
42	Electron-hole rearrangements in two-dimensional semimetals in high magnetic fields. Journal of Physics C: Solid State Physics, 1979, 12, L501-L505.	1.5	10
43	Granular superconductors: From the nonlinear f model to the Bose-Hubbard description. Physical Review B, 2001, 64, .	3.2	10
44	Dimensional crossover of the dephasing time in disordered mesoscopic rings. Physical Review B, 2009, 80, .	3.2	10
45	Thermal noise and dephasing due to electron interactions in nontrivial geometries. Physical Review B, 2011, 84, .	3.2	10
46	How to observe and quantify quantum-discord states via correlations. Physical Review A, 2019, 100, .	2.5	10
47	Local impurity in a multichannel Luttinger liquid. Physical Review B, 2017, 95, .	3.2	9
48	Spatially separated electron-hole system in high magnetic fields. Journal of Physics C: Solid State Physics, 1981, 14, L311-L315.	1.5	8
49	Effect of dephasing on mesoscopic conductance fluctuations in quantum dots with single-channel leads. Physical Review B, 1998, 57, 7219-7227.	3.2	8
50	Concentration dependence of the transition temperature in metallic spin glasses. Europhysics Letters, 2004, 66, 419-422.	2.0	8
51	Interplay of charge and spin in quantum dots: The Ising case. Physical Review B, 2011, 84, .	3.2	8
52	Impurity scattering in a Luttinger liquid with electron-phonon coupling. Physical Review B, 2011, 83, .	3.2	8
53	Distribution functions of mesoscopic fluctuations and applicability of the one-parameter scaling. Physica A: Statistical Mechanics and Its Applications, 1990, 167, 1-14.	2.6	7
54	Statistical properties of the first excited state of an interacting many-particle disordered system. Physical Review B, 2003, 68, .	3.2	7

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55	Crossover from diffusive to strongly localized regime in two-dimensional systems. Physical Review B, 2009, 80, .	3.2	7
56	Effect of electron-phonon coupling on transmission through Luttinger liquid hybridized with resonant level. Europhysics Letters, 2011, 93, 17009.	2.0	7
57	Influence of Nonmagnetic Disorder on the Indirect Interaction of Magnetic Impurities. Europhysics Letters, 1991, 16, 479-484.	2.0	6
58	On the crystallization of two-dimensional electron system in strong magnetic field. Solid State Communications, 1978, 25, 205-208.	1.9	5
59	Comment on "Anomalous Conductance Distribution in Quasi-One-Dimensional Gold Wires: Possible Violation of the One-Parameter Scaling Hypothesis": Physical Review Letters, 2004, 93, 159701; author reply 159702.	7.8	5
60	Berezinskii-Kosterlitz-Thouless transition in disordered multichannel Luttinger liquids. Physical Review B, 2017, 96, .	3.2	5
61	Correlation energy and excitation spectra of two-dimensional electron-hole systems in high magnetic fields. Solid State Communications, 1980, 36, 7-13.	1.9	4
62	Current relaxation in disordered conductors. Physica A: Statistical Mechanics and Its Applications, 1990, 167, 15-27.	2.6	4
63	Random walks in local dynamics of network losses. Physical Review E, 2006, 74, 046120.	2.1	3
64	Fluctuation-induced traffic congestion in heterogeneous networks. Europhysics Letters, 2012, 100, 36002.	2.0	3
65	Hong-Ou-Mandel Interference with a Single Atom. Scientific Reports, 2015, 5, 13947.	3.3	3
66	The effect of weak disorder on random walks in a magnetic field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1986, 114, 58-60.	2.1	2
67	Spatial correlations and multifractality in the local density of states in disordered mesoscopic systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 205, 393-400.	2.1	2
68	Seminar 1 Impurity in the tomonaga-luttinger model: A functional integral approach. Les Houches Summer School Proceedings, 2005, 81, 109-127.	0.2	2
69	Temporal correlations of local network losses. Physical Review E, 2008, 77, 046115.	2.1	2
70	Instability of the sliding Luttinger liquid. Journal of Physics Condensed Matter, 2018, 30, 185602.	1.8	2
71	Electron-phonon decoupling in two dimensions. Scientific Reports, 2021, 11, 24293.	3.3	2
72	Electron-hole liquid near semiconductor-metal interface. Physics Letters, Section A: General, Atomic and Solid State Physics, 1978, 64, 483-484.	2.1	1

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73	On existence of quantum diffusion of 2-D electrons at the surface. Solid State Communications, 1983, 47, 297-301.	1.9	1
74	Asymptotically exact probability distribution for the Sinai model with finite drift. Physical Review E, 2010, 82, 030103.	2.1	1
75	Fluctuation-driven traffic congestion in a scale-free model of the Internet. , 2013, , .		1
76	Reply to "Comment on "How to observe and quantify quantum-discord states via correlations"â€. Physical Review A, 2020, 102, .	2.5	1
77	Nonlinear Sigma Model for Disordered Media: Replica Trick for Non-Perturbative Results and Interactions. , 2002, , 341-373.		1
78	Spectroscopy of energy gap in ceramics and oriented films of YBa2Cu3O7 in the regime of negative light fluxes. Solid State Communications, 1989, 69, 373-377.	1.9	0
79	PHYSICS: So Small Yet Still Giant. Science, 2007, 316, 63-64.	12.6	0
80	Impurity Scattering in Luttinger Liquid with Electron-Phonon Coupling. Journal of Physics: Conference Series, 2011, 286, 012049.	0.4	0
81	Quantum corrections to the polarizability and dephasing in isolated disordered metals. Physical Review B, 2013, 88, .	3.2	0
82	Fluctuation susceptibility of ultracold bosons in the vicinity of condensation in the presence of an artificial magnetic field. Physical Review A, 2016, 93, .	2.5	0
83	Low Temperature Decoherence and Relaxation in Charge Josephson Junction Qubits. Springer Series in Solid-state Sciences, 2007, , 77-101.	0.3	0
84	One-Dimensional Transport of Ultracold Bosons. Acta Physica Polonica A, 2019, 135, 1162-1170.	0.5	0