

# Ilya Eremin

## List of Publications by Year in descending order

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168  
papers

5,780  
citations

94381

37  
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85498

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174  
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174  
docs citations

174  
times ranked

4432  
citing authors



#	ARTICLE	IF	CITATIONS
19	Effect of Fermi Surface Nesting on Resonant Spin Excitations in $\text{BaFe}_2\text{As}_2$ . <i>Physical Review Letters</i> , 2011, 107, 177003.	2.9	63
20	Robust determination of the superconducting gap sign structure via quasiparticle interference. <i>Physical Review B</i> , 2015, 92, .	1.1	64
21	Evidence for an Fulde-Ferrell-Larkin-Ovchinnikov State with Segmented Vortices in the BCS-BEC-Crossover Superconductor FeSe. <i>Physical Review Letters</i> , 2020, 124, 107001.	2.9	63
22	Superconductivity with broken time-reversal symmetry inside a superconducting s-wave state. <i>Nature Physics</i> , 2020, 16, 789-794.	6.5	59
23	Sign reversal of the order parameter in $(\text{Li}_{1-x}\text{Fe}_x)\text{OHFe}_1\text{Zn}_y\text{Se}$ . <i>Nature Physics</i> , 2018, 14, 134-139.	6.5	58
24	Ultrafast Modulation of the Chemical Potential in $\text{BaFe}_2\text{As}_2$ . Coherent Phonons. <i>Physical Review Letters</i> , 2014, 112, .	2.9	56
25	Superconductivity from repulsion in $\text{LiFeAs}$ : Novel s-wave symmetry and potential time-reversal symmetry breaking. <i>Physical Review B</i> , 2014, 89, .	1.1	56
26	Theory for electron-doped cuprate superconductors: d-wave symmetry order parameter. <i>Physical Review B</i> , 2000, 62, 13922-13925.	1.1	55
27	Pairing symmetry of the one-band Hubbard model in the paramagnetic weak-coupling limit: A numerical RPA study. <i>Physical Review B</i> , 2015, 92, .	1.1	50
28	Electronic theory for the normal-state spin dynamics in $\text{Sr}_2\text{RuO}_4$ : Anisotropy due to spin-orbit coupling. <i>Physical Review B</i> , 2002, 65, .	1.1	49
29	Spin reorientation driven by the interplay between spin-orbit coupling and Hund's rule coupling in iron pnictides. <i>Physical Review B</i> , 2015, 92, .	1.1	49
30	Anisotropic softening of magnetic excitations along the nodal direction in superconducting cuprates. <i>Nature Communications</i> , 2014, 5, 5760.	5.8	48
31	Analysis of the Elementary Excitations in High-Tc Cuprates: Explanation of the New Energy Scale Observed by Angle-Resolved Photoemission Spectroscopy. <i>Physical Review Letters</i> , 2001, 87, 177005.	2.9	47
32	Spin susceptibility and pseudogap in $\text{YBa}_2\text{Cu}_4\text{O}_8$ : An approach via a charge-density-wave instability. <i>Physical Review B</i> , 1997, 56, 11305-11311.	1.1	46
33	Renormalization of the elementary excitations in hole- and electron-doped cuprates due to spin fluctuations. <i>Physical Review B</i> , 2003, 67, .	1.1	46
34	Quasiparticle Interference in the Spin-Density Wave Phase of Iron-Based Superconductors. <i>Physical Review Letters</i> , 2010, 104, 257001.	2.9	43
35	Nonanalytic Spin Susceptibility of a Fermi Liquid: The Case of Fe-Based Pnictides. <i>Physical Review Letters</i> , 2009, 102, 236403.	2.9	41
36	Theory of Raman response of a superconductor with extended s-wave symmetry: Application to the iron pnictides. <i>Physical Review B</i> , 2009, 79, .	1.1	38

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37	Pressure-induced electronic phase separation of magnetism and superconductivity in CrAs. Scientific Reports, 2015, 5, 13788.	1.6	37
38	Quasiparticle interference in iron-based superconductors. Physical Review B, 2010, 82, .	1.1	36
39	Interaction of Skyrmions and Pearl Vortices in Superconductor-Chiral Ferromagnet Heterostructures. Physical Review Letters, 2019, 122, 097001.	2.9	36
40	Unconventional superconductivity and magnetism in Sr <sub>2</sub> RuO <sub>4</sub> and related materials. Annalen Der Physik, 2004, 13, 149-174.	0.9	34
41	Magnetic Resonance in the Spin Excitation Spectrum of Electron-Doped Cuprate Superconductors. Physical Review Letters, 2007, 99, 047005.	2.9	34
42	Multiorbital spin susceptibility in a magnetically ordered state: Orbital versus excitonic spin density wave scenario. Physical Review B, 2011, 83, .	1.1	32
43	Quasiparticle interference in the heavy-fermion superconductor $CeCoIn_5$ . Physical Review B, 2011, 84, .	1.1	32
44	Pairing in the two-dimensional Hubbard model from weak to strong coupling. Physical Review Research, 2020, 2, .	1.3	32
45	Local-moment fluctuations in the optimally doped high- $T_c$ superconductor $YBaCu_2$ . Physical Review B, 2008, 78, .	1.1	31
46	Relation between the one-particle spectral function and dynamic spin susceptibility of superconducting $Bi_2Sr_2CaCu_2O_{8-\delta}$ . Physical Review B, 2007, 75, .	1.1	30
47	Theory of magnetic excitons in the heavy-fermion superconductor $UPd_2Al_3$ . Physical Review B, 2007, 75, .	1.1	29
48	Itinerant in-plane magnetic fluctuations and many-body correlations in $NaxCoO_2$ . Physical Review B, 2007, 75, .	1.1	29
49	Electronic theory for superconductivity in $Sr_2RuO_4$ : Triplet pairing due to spin-fluctuation exchange. Europhysics Letters, 2002, 58, 871-877.	0.7	28
50	Impurity resonance states in noncentrosymmetric superconductor $CePt_3$ . A probe for Cooper-pairing symmetry. Physical Review B, 2008, 78, .	1.1	28
51	Theory of nonequilibrium dynamics of multiband superconductors. Europhysics Letters, 2013, 101, 17002.	0.7	28
52	Electronic properties, low-energy Hamiltonian, and superconducting instabilities in $CaKFe_4As_8$ . Physical Review B, 2017, 96, .	1.1	28
53	RKKY interaction in the spin-density-wave phase of iron-based superconductors. Physical Review B, 2011, 84, .	1.1	27
54	Incommensurate magnetic fluctuations and Fermi surface topology in LiFeAs. Physical Review B, 2012, 86, .	1.1	27



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73	Evolution of the multiband Ruderman-Kittel-Kasuya-Yosida interaction: application to iron pnictides and chalcogenides. <i>New Journal of Physics</i> , 2013, 15, 033034.	1.2	19
74	Mutual Independence of Critical Temperature and Superfluid Density under Pressure in Optimally Electron-Doped Superconducting $\text{LaFeAsO}_{1-x}\text{F}_x$ . <i>Physical Review Letters</i> , 2015, 114, 247004.	2.9	19
75	Possible isotope effect on the resonance peak formation in high-Tc cuprates. <i>Physical Review B</i> , 2004, 69, .	1.1	18
76	Angle-resolved specific heat in iron-based superconductors: The case for a nodeless extended $s$ -wave gap. <i>Physical Review B</i> , 2010, 82, .	1.1	18
77	Magnetic resonance from the interplay of frustration and superconductivity. <i>Physical Review B</i> , 2011, 84, .	1.1	18
78	Collective modes in pumped unconventional superconductors with competing ground states. <i>Physical Review B</i> , 2019, 100, .	1.1	18
79	Theory of the pseudogap in the elementary excitation spectrum of the normal phase of bilayer cuprates. <i>JETP Letters</i> , 1997, 66, 569-574.	0.4	17
80	Effect of nodes, ellipticity, and impurities on the spin resonance in iron-based superconductors. <i>Physical Review B</i> , 2011, 84, .	1.1	17
81	Non-local dxy nematicity and the missing electron pocket in FeSe. <i>Npj Quantum Materials</i> , 2021, 6, .	1.8	17
82	Spin-Orbit Coupling in Fe-Based Superconductors. <i>Journal of Superconductivity and Novel Magnetism</i> , 2013, 26, 2873-2874.	0.8	16
83	Theory of Multiband Superconductivity in Spin-Density-Wave Metals. <i>Physical Review Letters</i> , 2010, 105, 037003.	2.9	15
84	Collective magnetic excitations of $C_{4v}$ -symmetric magnetic states in iron-based superconductors. <i>Physical Review B</i> , 2016, 94, .	1.1	15
85	In-plane magnetic penetration depth of superconducting $\text{CaKFe}_{4}\text{As}_{10}$ . <i>Physical Review B</i> , 2018, 97, .	1.1	15
86	Superconducting phase diagram of itinerant antiferromagnets. <i>Physical Review B</i> , 2016, 93, .	1.1	14
87	Spin excitations and the Fermi surface of superconducting FeS. <i>Npj Quantum Materials</i> , 2017, 2, .	1.8	14
88	Theory for phonon-induced superconductivity in $\text{MgB}_2$ . <i>Physical Review B</i> , 2002, 65, .	1.1	13
89	Signature of the nonmonotonic $d$ -wave gap in electron-doped cuprates. <i>Physical Review B</i> , 2008, 77, .	1.1	13
90	Pair breaking by nonmagnetic impurities in the noncentrosymmetric superconductor $\text{CePt}_3\text{Si}$ . <i>Physical Review B</i> , 2010, 81, .	1.1	13

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91	Dynamical spin susceptibility and the resonance peak in the pseudogap region of the underdoped cuprate superconductors. Physical Review B, 2006, 73, .	1.1	12
92	Magnetic field dependence of the superconducting gap node topology in noncentrosymmetric CePt3Si. Physical Review B, 2006, 74, .	1.1	12
93	Semimetal-insulator transition on the surface of a topological insulator with in-plane magnetization. Physical Review B, 2013, 88, .	1.1	12
94	Short-time dynamics in $s$ -wave superconductor with incipient bands. Physical Review B, 2018, 98, .	1.1	12
95	Phase-dependent spin polarization of Cooper pairs in magnetic Josephson junctions. Physical Review B, 2019, 100, .	1.1	12
96	CDW as a possible reason for the pseudogap in the normal state of high- $T_c$ cuprates. Journal of Superconductivity and Novel Magnetism, 1997, 10, 459-460.	0.5	11
97	Spin susceptibility in bilayered cuprates: Resonant magnetic excitations. Physical Review B, 2007, 75, .	1.1	11
98	Electronic theory for itinerant in-plane magnetic fluctuations in $\text{Na}_x\text{CoO}_2$ . JETP Letters, 2007, 84, 650-655.	0.4	11
99	Dynamic spin susceptibility of hole-doped high-temperature superconductors in a singlet-correlated conduction band model. Journal of Experimental and Theoretical Physics, 2008, 106, 752-764.	0.2	11
100	Electron-phonon interaction in the lamellar cobaltate $\text{Na}_x\text{CoO}_2$ . Physical Review B, 2008, 77, .	1.1	11
101	Strong-coupling topological Josephson effect in quantum wires. Journal of Physics Condensed Matter, 2012, 24, 325701.	0.7	11
102	Antiferromagnetism in Iron-Based Superconductors: Selection of Magnetic Order and Quasiparticle Interference. Journal of the Physical Society of Japan, 2014, 83, 061015.	0.7	11
103	Surface State Tunneling Signatures in the Two-Component Superconductor $\text{UPt}_3$ . Physical Review Letters, 2017, 118, 087004.	2.9	11
104	Electronic theory for scanning tunneling microscopy spectra in infinite-layer nickelate superconductors. Physical Review B, 2021, 104, .	1.1	11
105	Dictionary learning in Fourier-transform scanning tunneling spectroscopy. Nature Communications, 2020, 11, 1081.	5.8	10
106	Effective parameters of the band dispersion in n-type high- $T_c$ superconductors. Physica C: Superconductivity and Its Applications, 2004, 402, 365-370.	0.6	9
107	Dynamical magnetic susceptibility of the lamellar cuprate superconductor $\text{Na}_x\text{CoO}_2$ . Physical Review B, 2008, 77, .	1.1	9
108	Multipolar Order and Superconductivity in f-Electron Compounds. Journal of the Physical Society of Japan, 2008, 77, 43-47.	0.7	9

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109	Meissner currents induced by topological magnetic textures in hybrid superconductor/ferromagnet structures. <i>Physical Review B</i> , 2020, 102, .	1.1	9
110	Doping asymmetry of superconductivity coexisting with antiferromagnetism in spin fluctuation theory. <i>New Journal of Physics</i> , 2015, 17, 023022.	1.2	8
111	Fluctuation-induced Néel and Bloch skyrmions at topological insulator surfaces. <i>Physical Review B</i> , 2018, 98, .	1.1	8
112	Signatures of Bardasis-Schrieffer mode excitation in third-harmonic generated currents. <i>Physical Review B</i> , 2021, 104, .	1.1	8
113	Quantum dynamics of disordered arrays of interacting superconducting qubits: Signatures of quantum collective states. <i>Physical Review B</i> , 2022, 105, .	1.1	8
114	Theory for electron- and hole-doped cuprate superconductors: d-wave symmetry order parameter. <i>Europhysics Letters</i> , 2001, 53, 371-377.	0.7	7
115	Network patterns and strength of orbital currents in layered cuprates. <i>Physical Review B</i> , 2002, 66, .	1.1	7
116	Formation of magnetic moments in the cuprate superconductor $\text{Hg}_{0.8}\text{Cu}_{0.2}\text{Ba}_2\text{Ca}_2\text{Cu}_3\text{O}_{8+\delta}$ below $T_c$ seen by NQR. <i>Physica C: Superconductivity and Its Applications</i> , 2004, 406, 27-36.	0.6	7
117	On interplay between the magnetic susceptibilities of localized and itinerant electrons in hole-doped HTSCs. <i>JETP Letters</i> , 2006, 84, 167-170.	0.4	7
118	Theory of the bound state of $4f$ excitations and magnetic resonance in unconventional superconductors. <i>Physical Review B</i> , 2009, 80, .	1.1	7
119	Three-orbital Model for Fe-Pnictides. <i>Journal of Superconductivity and Novel Magnetism</i> , 2013, 26, 2665-2668.	0.8	7
120	Thermal screening at finite chemical potential on a topological surface and its interplay with proximity-induced ferromagnetism. <i>Physical Review B</i> , 2014, 90, .	1.1	7
121	Polar Kerr effect from a time-reversal symmetry breaking unidirectional charge density wave. <i>Physical Review B</i> , 2015, 91, .	1.1	7
122	Scanning tunnelling spectroscopy as a probe of multi-Q magnetic states of itinerant magnets. <i>Nature Communications</i> , 2017, 8, 14317.	5.8	7
123	Magnitude of spin and charge density wave amplitudes in underdoped cuprates. <i>Applied Magnetic Resonance</i> , 2000, 19, 355-362.	0.6	6
124	Spin dynamics of itinerant holes in HTSC cuprates: the singlet-correlated band model and its applications. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 116209.	0.7	6
125	Interplay between nematicity and Bardasis-Schrieffer modes in the short-time dynamics of unconventional superconductors. <i>Physical Review B</i> , 2021, 103, .	1.1	6
126	Specific heat and gap structure of a nematic superconductor: Application to FeSe. <i>Physical Review B</i> , 2021, 104, .	1.1	6

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127	Spin excitations in layered cuprates: a Fermi-liquid approach. <i>Low Temperature Physics</i> , 2006, 32, 519-532.	0.2	5
128	Quasiparticle interference and symmetry of superconducting order parameter in strongly electron-doped iron-based superconductors. <i>New Journal of Physics</i> , 2019, 21, 083021.	1.2	5
129	Phase-sensitive determination of nodal $d$ -wave order parameter in single-band and multiband superconductors. <i>Physical Review B</i> , 2020, 101, .	1.1	5
130	Multi-atom quasiparticle scattering interference for superconductor energy-gap symmetry determination. <i>Npj Quantum Materials</i> , 2021, 6, .	1.8	5
131	Electronic Theory for the Magnetic Anisotropy in $\text{Sr}_2\text{RuO}_4$ . <i>Journal of Superconductivity and Novel Magnetism</i> , 2002, 15, 447-450.	0.5	4
132	Influence of Long-Range Coulomb Interaction and On-Site Hubbard Repulsion on the Formation of $d$ -Wave Copper-Pairing in High-Tc Cuprates. <i>Journal of Superconductivity and Novel Magnetism</i> , 2004, 17, 421-430.	0.5	4
133	Strong-coupling theory of the universal linear temperature dependence of the nodal Fermi velocity in layered cuprates. <i>Physical Review B</i> , 2008, 78, .	1.1	4
134	Higgs mechanism, phase transitions, and anomalous Hall effect in three-dimensional topological superconductors. <i>Physical Review B</i> , 2015, 92, .	1.1	4
135	Quasiparticle interference from different impurities on the surface of pyrochlore iridates: Signatures of the Weyl phase. <i>Physical Review B</i> , 2016, 94, .	1.1	4
136	Spin-orbit coupling, minimal model and potential Cooper-pairing from repulsion in $\text{BiS}_2$ -superconductors. <i>New Journal of Physics</i> , 2018, 20, 043029.	1.2	4
137	Finite temperature fluctuation-induced order and responses in magnetic topological insulators. <i>Physical Review Research</i> , 2021, 3, .	1.3	4
138	Dynamic susceptibility in two-dimensional Hubbard model. <i>Physica B: Condensed Matter</i> , 1997, 234-236, 792-793.	1.3	3
139	Magnetic Rare-Earth Impurity Resonance Bound States in Iron-Based Superconductors. <i>Journal of Superconductivity and Novel Magnetism</i> , 2011, 24, 1173-1176.	0.8	3
140	<i>Ab initio</i> study of the structural response to magnetic disorder and van der Waals interactions in FeSe. <i>Physical Review B</i> , 2021, 103, .	1.1	3
141	Influence of incommensurability on SDW and CDW amplitudes in underdoped cuprates. <i>Physica C: Superconductivity and Its Applications</i> , 2000, 341-348, 937-938.	0.6	2
142	Polaron effects on superexchange interaction: Isotope shifts of $T_N$ , $T_c$ , and $T^*$ in layered copper oxides. <i>JETP Letters</i> , 2002, 75, 395-398.	0.4	2
143	Comment on "Spin Dynamics of the Electron-Doped High-Tc Superconducting Cuprates". <i>Physical Review Letters</i> , 2006, 97, 239701; author reply 239702.	2.9	2
144	Theory of dynamic spin susceptibility in terms of the $t$ - $J$ - $V$ model: Comparison with neutron scattering data for $\text{Pr}_{0.88}\text{La}_{0.12}\text{CuO}_4$ and $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ . <i>Journal of Experimental and Theoretical Physics</i> , 2009, 108, 56-67.	0.2	2

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145	Feedback Spin Exciton Formation in Unconventional Superconductors. Journal of Superconductivity and Novel Magnetism, 2010, 23, 729-732.	0.8	2
146	Model of nonadiabatic-to-adiabatic dynamical quantum phase transition in photoexcited systems. Physical Review B, 2014, 90, .	1.1	2
147	The model of singlet-correlated bands for temperature and doping dependences of Cu(2) Knight shift in bilayered cuprates. Physica B: Condensed Matter, 1997, 230-232, 952-954.	1.3	1
148	Eremin and Manske Reply:. Physical Review Letters, 2007, 98, .	2.9	1
149	About the relation between the quasiparticle Green's function in cuprates obtained from ARPES data and the magnetic susceptibility. Physica C: Superconductivity and Its Applications, 2007, 460-462, 939-940.	0.6	1
150	On the theory of inelastic neutron scattering in the Pr <sub>0.88</sub> LaCe <sub>0.12</sub> CuO <sub>4-x</sub> superconductor. JETP Letters, 2007, 86, 333-336.	0.4	1
151	Electron-Phonon Interaction and Phonon Renormalization in the Lamellar Cobaltate Na <sub>x</sub> CoO <sub>2</sub> . Journal of Superconductivity and Novel Magnetism, 2009, 22, 37-40.	0.8	1
152	Investigation of magnetic phases in parent compounds of iron-chalcogenides via quasiparticle scattering interference. Europhysics Letters, 2016, 114, 17001.	0.7	1
153	Signatures of Collective Modes in Fifth Harmonic Generation of BCS superconductor. Faraday Discussions, 0, , .	1.6	1
154	Non-Fermi liquid correction to uniform spin susceptibility of singlet band below T <sub>c</sub> . Solid State Communications, 1998, 105, 293-296.	0.9	0
155	ELECTRONIC THEORY FOR ELECTRON-DOPED CUPRATE SUPERCONDUCTORS: d-WAVE SUPERCONDUCTIVITY AND THE PHASE DIAGRAM. International Journal of Modern Physics B, 2000, 14, 3555-3560.	1.0	0
156	THEORY FOR INELASTIC NEUTRON SCATTERING IN HIGH-T <sub>c</sub> SUPERCONDUCTORS: DOPING AND TEMPERATURE DEPENDENCE OF TWO CHARACTERISTIC FREQUENCIES. International Journal of Modern Physics B, 2000, 14, 3451-3456.	1.0	0
157	Electronic theory for electron- and hole-doped high-T <sub>c</sub> superconductors: Cooper pairing due to spin fluctuations. Physica C: Superconductivity and Its Applications, 2001, 364-365, 5-8.	0.6	0
158	Dynamical Charge and Spin Susceptibilities in a Frame of t-J-G Model. Journal of Superconductivity and Novel Magnetism, 2002, 15, 413-416.	0.5	0
159	Spin susceptibility in the superconducting state of cuprates. Physica C: Superconductivity and Its Applications, 2004, 408-410, 400-401.	0.6	0
160	Dielectric response function in the "t" model. Physica B: Condensed Matter, 2006, 378-380, 441-442.	1.3	0
161	Resonant spin excitations in high-T <sub>c</sub> cuprates: Influence of the pseudogap. Physica C: Superconductivity and Its Applications, 2007, 460-462, 1133-1134.	0.6	0
162	Feedback effect on spin excitations in Ce-based unconventional superconductors. Physica C: Superconductivity and Its Applications, 2010, 470, S548-S549.	0.6	0

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163	Particle-hole asymmetry as a source of phase separation at the metal-insulator transition. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 395002.	0.7	0
164	Magnetism and Superconductivity. , 2021, , 1-31.		0
165	Itinerant Magnetic Order and Multiorbital Effects in Iron-Based Superconductors. Springer Series in Solid-state Sciences, 2017, , 7-51.	0.3	0
166	Magnetism and Superconductivity. , 2021, , 625-655.		0
167	Charge and spin supercurrents in magnetic Josephson junctions with spin filters and domain walls. Physical Review B, 2022, 105, .	1.1	0
168	Feedback of Non-Local dxy Nematicity on the Magnetic Anisotropy in FeSe. Frontiers in Physics, 0, 10, .	1.0	0