

Boris V Svistunov

List of Publications by Year in descending order

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79
papers

4,520
citations

126907

33
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102487

66
g-index

80
all docs

80
docs citations

80
times ranked

2173
citing authors

#	ARTICLE	IF	CITATIONS
1	Bond bipolarons: Sign-free Monte Carlo approach. Physical Review B, 2022, 105, .	3.2	7
2	Supertransport by Superclimbing Dislocations in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mrow} \langle \text{mml:mmultiscripts} \langle \text{mml:mrow} \langle \text{mml:mi} \text{He} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \langle \text{mml:mprescripts} \text{}/ \rangle \langle \text{mml:none} \text{}/ \rangle \langle \text{mml:mrow} \langle \text{mml:mn} \text{4} \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mmultiscripts} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle :$ When All Dimensions Matter. Physical Review Letters, 2022, 128, .	7.8	7
3	Homotopic Action: A Pathway to Convergent Diagrammatic Theories. Physical Review Letters, 2021, 126, 257001.	7.8	8
4	Peierls/Su-Schrieffer-Heeger polarons in two dimensions. Physical Review B, 2021, 104, .	3.2	13
5	Anomalously small excitation gaps as precursors of dislocation core superfluidity in solid helium-4. Physical Review B, 2021, 104, .	3.2	0
6	Quantum-to-classical correspondence in two-dimensional Heisenberg models. Physical Review B, 2020, 101, .	3.2	3
7	Disorder-induced quantum properties of solid ^4He . Low Temperature Physics, 2020, 46, 459-464.	0.6	3
8	Space- and time-crystallization effects in multicomponent superfluids. Physical Review B, 2020, 101, .	3.2	6
9	Implicit renormalization approach to the problem of Cooper instability. Physical Review B, 2019, 100, .	3.2	13
10	Implementation of the bin hierarchy method for restoring a smooth function from a sampled histogram. Computer Physics Communications, 2019, 236, 205-213.	7.5	1
11	Halon: A quasiparticle featuring critical charge fractionalization. Physical Review B, 2018, 98, .	3.2	4
12	Quantized magnetic flux and the magnetohalon effect in a critical superconductor. Physical Review B, 2018, 98, .	3.2	1
13	Trapping collapse: Infinite number of repulsive bosons trapped by a generic short-range potential. Physical Review A, 2018, 98, .	2.5	8
14	Stochastic lists: Sampling multivariable functions with population methods. Physical Review B, 2018, 98, .	3.2	4
15	Restoring a smooth function from its noisy integrals. Physical Review E, 2018, 97, 053305.	2.1	2
16	Numerical analytic continuation: Answers to well-posed questions. Physical Review B, 2017, 95, .	3.2	52
17	Grassmannization of classical models. New Journal of Physics, 2016, 18, 113025.	2.9	3
18	Dark continuum in the spectral function of the resonant Fermi polaron. Physical Review A, 2016, 94, .	2.5	43

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19	Spin-Ice State of the Quantum Heisenberg Antiferromagnet on the Pyrochlore Lattice. Physical Review Letters, 2016, 116, 177203.	7.8	39
20	Shifted-action expansion and applicability of dressed diagrammatic schemes. Physical Review B, 2016, 93, .	3.2	43
21	Quantum Walk in Degenerate Spin Environments. Physical Review Letters, 2016, 116, 247202.	7.8	20
22	Trapping centers at the superfluidâ€™Mott-insulator criticality: Transition between charge-quantized states. Physical Review B, 2016, 94, .	3.2	8
23	Emergent BCS regime of the two-dimensional fermionic Hubbard model: Ground-state phase diagram. Europhysics Letters, 2015, 110, 57001.	2.0	64
24	Asymptotically exact scenario of strong-disorder criticality in one-dimensional superfluids. Physical Review B, 2014, 89, .	3.2	19
25	Rotational response of superconductors: Magnetorotational isomorphism and rotation-induced vortex lattice. Physical Review B, 2014, 89, .	3.2	5
26	p-Wave Superfluidity by Spin-Nematic Fermi Surface Deformation. Physical Review Letters, 2014, 113, 195301.	7.8	17
27	Classical-field renormalization flow of one-dimensional disordered bosons. Physical Review B, 2013, 87, .	3.2	20
28	From the Popov-Fedotov case to universal fermionization. Physical Review B, 2011, 84, .	3.2	12
29	Incorporating dynamic mean-field theory into diagrammatic Monte Carlo. Physical Review B, 2011, 83, .	3.2	14
30	The role of defects in Supersolid Helium-4. Physics Procedia, 2010, 7, 80-84.	1.2	1
31	Comment on â€œDirect Mapping of the Finite Temperature Phase Diagram of Strongly Correlated Quantum Modelsâ€: Physical Review Letters, 2010, 105, 199601; author reply 199602.	7.8	10
32	Regularization of Diagrammatic Series with Zero Convergence Radius. Physical Review Letters, 2010, 105, 210601.	7.8	13
33	Geometric symmetries in superfluid vortex dynamics. Physical Review B, 2010, 82, .	3.2	19
34	Supersolidity of helium-4: Disordered scenarios. Physica B: Condensed Matter, 2009, 404, 521-523.	2.7	4
35	The turbulent matter field of ultracold atoms. Physics Magazine, 2009, 2, .	0.1	4
36	Scanning Superfluid-Turbulence Cascade by its Low-Temperature Cutoff. Physical Review Letters, 2008, 100, 195302.	7.8	25

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37	Monte Carlo study of the two-dimensional Bose-Hubbard model. Physical Review A, 2008, 77, .	2.5	229
38	Kolmogorov and Kelvin-wave cascades of superfluid turbulence at $T > 0$: What lies between. Physical Review B, 2008, 77, .	3.2	69
39	Critical Temperature Curve in BEC-BCS Crossover. Physical Review Letters, 2008, 101, 090402.	7.8	81
40	Fermi-polaron problem: Diagrammatic Monte Carlo method for divergent sign-alternating series. Physical Review B, 2008, 77, .	3.2	252
41	On-site number statistics of ultracold lattice bosons. Physical Review A, 2007, 75, .	2.5	29
42	Bold Diagrammatic Monte Carlo Technique: When the Sign Problem Is Welcome. Physical Review Letters, 2007, 99, 250201.	7.8	107
43	The Fermi-Hubbard model at unitarity. New Journal of Physics, 2006, 8, 153-153.	2.9	84
44	Critical Temperature and Thermodynamics of Attractive Fermions at Unitarity. Physical Review Letters, 2006, 96, 160402.	7.8	212
45	Worm Algorithm for Continuous-Space Path Integral Monte Carlo Simulations. Physical Review Letters, 2006, 96, 070601.	7.8	284
46	Comment on "Hausdorff Dimension of Critical Fluctuations in Abelian Gauge Theories". Physical Review Letters, 2006, 96, 219701; author reply 219702.	7.8	10
47	Superglass Phase of He4. Physical Review Letters, 2006, 96, 105301.	7.8	175
48	Vortex-phonon interaction in the Kosterlitz-Thouless theory. Physical Review B, 2006, 73, .	3.2	3
49	High-precision measurement of the thermal exponent for the three-dimensional XY universality class. Physical Review B, 2006, 74, .	3.2	58
50	Weak First-Order Superfluid-Solid Quantum Transitions and Deconfined Criticality. Progress of Theoretical Physics Supplement, 2005, 160, 337-350.	0.1	3
51	Vortex-phonon interaction. Physical Review B, 2005, 72, .	3.2	40
52	Superfluid-Insulator Transition in a Commensurate One-Dimensional Bosonic System with Off-Diagonal Disorder. Physical Review Letters, 2005, 95, 055701.	7.8	24
53	Scale-Separation Scheme for Simulating Superfluid Turbulence: Kelvin-Wave Cascade. Physical Review Letters, 2005, 94, 025301.	7.8	48
54	Supersolid State of Matter. Physical Review Letters, 2005, 94, 155302.	7.8	152

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55	Superfluid Interfaces in Quantum Solids. <i>Physical Review Letters</i> , 2005, 94, 165301.	7.8	56
56	Detecting supercounterfluidity by Ramsey spectroscopy. <i>Physical Review A</i> , 2004, 69, .	2.5	17
57	Truncated-determinant diagrammatic Monte Carlo for fermions with contact interaction. <i>Physical Review B</i> , 2004, 70, .	3.2	12
58	Superfluid-Superfluid Phase Transitions in a Two-Component Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2004, 92, 030403.	7.8	79
59	Weak First-Order Superfluid-Solid Quantum Phase Transitions. <i>Physical Review Letters</i> , 2004, 93, 230402.	7.8	45
60	Superfluid-Insulator Transition in Commensurate Disordered Bosonic Systems: Large-Scale Worm Algorithm Simulations. <i>Physical Review Letters</i> , 2004, 92, 015703.	7.8	105
61	Commensurate Two-Component Bosons in an Optical Lattice: Ground State Phase Diagram. <i>Physical Review Letters</i> , 2004, 92, 050402.	7.8	157
62	Weakly interacting Bose gas in the vicinity of the normal-fluidâ€“superfluid transition. <i>Physical Review A</i> , 2004, 69, .	2.5	28
63	Kelvin-Wave Cascade and Decay of Superfluid Turbulence. <i>Physical Review Letters</i> , 2004, 92, 035301.	7.8	148
64	Two-dimensional weakly interacting Bose gas in the fluctuation region. <i>Physical Review A</i> , 2002, 66, .	2.5	154
65	A Critical Point. <i>Physics Today</i> , 2002, 55, 85-85.	0.3	1
66	Scenario of strongly nonequilibrated Bose-Einstein condensation. <i>Physical Review A</i> , 2002, 66, .	2.5	168
67	Critical Point of a Weakly Interacting Two-Dimensional Bose Gas. <i>Physical Review Letters</i> , 2001, 87, 270402.	7.8	199
68	Worm Algorithms for Classical Statistical Models. <i>Physical Review Letters</i> , 2001, 87, 160601.	7.8	269
69	Strongly non-equilibrium Boseâ€“Einstein condensation in a trapped gas. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2001, 287, 169-174.	2.1	11
70	Kinetics of Strongly Non-equilibrium Bose-Einstein Condensation. , 2001, , 327-333.		2
71	Two definitions of superfluid density. <i>Physical Review B</i> , 2000, 61, 11282-11284.	3.2	56
72	Quantum Monte Carlo Scheme to Study Coherent Tunneling. <i>Physical Review Letters</i> , 1999, 82, 5092-5095.	7.8	5

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73	Zero-point phase transitions in the one-dimensional truncated bosonic Hubbard model and its spin-1 analog. Physical Review B, 1998, 58, 1826-1831.	3.2	7
74	Polaron Problem by Diagrammatic Quantum Monte Carlo. Physical Review Letters, 1998, 81, 2514-2517.	7.8	256
75	Supercurrent states in one-dimensional finite-size rings. Physical Review B, 1996, 53, 13091-13105.	3.2	34
76	Superfluidâ€Bose-glass transition in weakly disordered commensurate one-dimensional system. Physical Review B, 1996, 54, 16131-16134.	3.2	39
77	Superfluid turbulence in the low-temperature limit. Physical Review B, 1995, 52, 3647-3653.	3.2	151
78	How Solid is Supersolid?. Physics Magazine, 0, 4, .	0.1	28
79	Superfluid States of Matter. , 0, , .		116