Boris V Svistunov

List of Publications by Year
in descending order

79 papers	4,520 citations	126907 33 h-index	102487 66 g-index
80 all docs	80 docs citations	80 times ranked	2173 citing authors

#	Article	IF	Citations
1	Worm Algorithm for Continuous-Space Path Integral MonteÂCarlo Simulations. Physical Review Letters, 2006, 96, 070601.	7.8	284
2	Worm Algorithms for Classical Statistical Models. Physical Review Letters, 2001, 87, 160601.	7.8	269
3	Polaron Problem by Diagrammatic Quantum Monte Carlo. Physical Review Letters, 1998, 81, 2514-2517.	7.8	256
4	Fermi-polaron problem: Diagrammatic Monte Carlo method for divergent sign-alternating series. Physical Review B, 2008, 77, .	3.2	252
5	Monte Carlo study of the two-dimensional Bose-Hubbard model. Physical Review A, 2008, 77, .	2.5	229
6	Critical Temperature and Thermodynamics of Attractive Fermions at Unitarity. Physical Review Letters, 2006, 96, 160402.	7.8	212
7	Critical Point of a Weakly Interacting Two-Dimensional Bose Gas. Physical Review Letters, 2001, 87, 270402.	7.8	199
8	Superglass Phase ofHe4. Physical Review Letters, 2006, 96, 105301.	7.8	175
9	Scenario of strongly nonequilibrated Bose-Einstein condensation. Physical Review A, 2002, 66, .	2.5	168
10	Commensurate Two-Component Bosons in an Optical Lattice: Ground State Phase Diagram. Physical Review Letters, 2004, 92, 050402.	7.8	157
11	Two-dimensional weakly interacting Bose gas in the fluctuation region. Physical Review A, 2002, 66, .	2.5	154
12	Supersolid State of Matter. Physical Review Letters, 2005, 94, 155302.	7.8	152
13	Superfluid turbulence in the low-temperature limit. Physical Review B, 1995, 52, 3647-3653.	3.2	151
14	Kelvin-Wave Cascade and Decay of Superfluid Turbulence. Physical Review Letters, 2004, 92, 035301.	7.8	148
15	Superfluid States of Matter. , 0, , .		116
16	Bold Diagrammatic MonteÂCarlo Technique: When the Sign Problem Is Welcome. Physical Review Letters, 2007, 99, 250201.	7.8	107
17	Superfluid-Insulator Transition in Commensurate Disordered Bosonic Systems: Large-Scale Worm Algorithm Simulations. Physical Review Letters, 2004, 92, 015703.	7.8	105
18	The Fermiâ€“Hubbard model at unitarity. New Journal of Physics, 2006, 8, 153-153.	2.9	84

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19	Critical Temperature Curve in BEC-BCS Crossover. Physical Review Letters, 2008, 101, 090402.	7.8	81
20	Superfluid-Superfluid Phase Transitions in a Two-Component Bose-Einstein Condensate. Physical Review Letters, 2004, 92, 030403.	7.8	79
21	Kolmogorov and Kelvin-wave cascades of superfluid turbulence at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>T</mml:mi><mml:mo>=</mml:mo><mml:mn>0</mml:mn></mml:mrow></mml:math>: What lies between. Physical Review B, 2008, 77, .	3.2	69
22	Emergent BCS regime of the two-dimensional fermionic Hubbard model: Ground-state phase diagram. Europhysics Letters, 2015, 110, 57001.	2.0	64
23	High-precision measurement of the thermal exponent for the three-dimensionalXYuniversality class. Physical Review B, 2006, 74, .	3.2	58
24	Two definitions of superfluid density. Physical Review B, 2000, 61, 11282-11284.	3.2	56
25	Superfluid Interfaces in Quantum Solids. Physical Review Letters, 2005, 94, 165301.	7.8	56
26	Numerical analytic continuation: Answers to well-posed questions. Physical Review B, 2017, 95, .	3.2	52
27	Scale-Separation Scheme for Simulating Superfluid Turbulence: Kelvin-Wave Cascade. Physical Review Letters, 2005, 94, 025301.	7.8	48
28	Weak First-Order Superfluid-Solid Quantum Phase Transitions. Physical Review Letters, 2004, 93, 230402.	7.8	45
29	Dark continuum in the spectral function of the resonant Fermi polaron. Physical Review A, 2016, 94, .	2.5	43
30	Shifted-action expansion and applicability of dressed diagrammatic schemes. Physical Review B, 2016, 93, .	3.2	43
31	Vortex-phonon interaction. Physical Review B, 2005, 72, .	3.2	40
32	Superfluidâ€“Bose-glass transition in weakly disordered commensurate one-dimensional system. Physical Review B, 1996, 54, 16131-16134.	3.2	39
33	Spin-Ice State of the Quantum Heisenberg Antiferromagnet on the Pyrochlore Lattice. Physical Review Letters, 2016, 116, 177203.	7.8	39
34	Supercurrent states in one-dimensional finite-size rings. Physical Review B, 1996, 53, 13091-13105.	3.2	34
35	On-site number statistics of ultracold lattice bosons. Physical Review A, 2007, 75, .	2.5	29
36	Weakly interacting Bose gas in the vicinity of the normal-fluidâ€“superfluid transition. Physical Review A, 2004, 69, .	2.5	28

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37	How Solid is Supersolid?. Physics Magazine, 0, 4, .	0.1	28
38	Scanning Superfluid-Turbulence Cascade by its Low-Temperature Cutoff. Physical Review Letters, 2008, 100, 195302.	7.8	25
39	Superfluid-Insulator Transition in a Commensurate One-Dimensional Bosonic System with Off-Diagonal Disorder. Physical Review Letters, 2005, 95, 055701.	7.8	24
40	Classical-field renormalization flow of one-dimensional disordered bosons. Physical Review B, 2013, 87, .	3.2	20
41	Quantum Walk in Degenerate Spin Environments. Physical Review Letters, 2016, 116, 247202.	7.8	20
42	Geometric symmetries in superfluid vortex dynamics. Physical Review B, 2010, 82, .	3.2	19
43	Asymptotically exact scenario of strong-disorder criticality in one-dimensional superfluids. Physical Review B, 2014, 89, .	3.2	19
44	Detecting supercounterfluidity by Ramsey spectroscopy. Physical Review A, 2004, 69, .	2.5	17
45	p-Wave Superfluidity by Spin-Nematic Fermi Surface Deformation. Physical Review Letters, 2014, 113, 195301.	7.8	17
46	Incorporating dynamic mean-field theory into diagrammatic Monte Carlo. Physical Review B, 2011, 83, .	3.2	14
47	Regularization of Diagrammatic Series with Zero Convergence Radius. Physical Review Letters, 2010, 105, 210601.	7.8	13
48	Implicit renormalization approach to the problem of Cooper instability. Physical Review B, 2019, 100, .	3.2	13
49	Peierls/Su-Schrieffer-Heeger polarons in two dimensions. Physical Review B, 2021, 104, .	3.2	13
50	Truncated-determinant diagrammatic Monte Carlo for fermions with contact interaction. Physical Review B, 2004, 70, .	3.2	12
51	From the Popov-Fedotov case to universal fermionization. Physical Review B, 2011, 84, .	3.2	12
52	Strongly non-equilibrium Boseâ€“Einstein condensation in aÂtrapped gas. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 287, 169-174.	2.1	11
53	Comment on â€œHausdorff Dimension of Critical Fluctuations in Abelian Gauge Theoriesâ€• Physical Review Letters, 2006, 96, 219701; author reply 219702.	7.8	10
54	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

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55	Trapping centers at the superfluidâ€“Mott-insulator criticality: Transition between charge-quantized states. Physical Review B, 2016, 94, .	3.2	8
56	Trapping collapse: Infinite number of repulsive bosons trapped by a generic short-range potential. Physical Review A, 2018, 98, .	2.5	8
57	Homotopic Action: A Pathway to Convergent Diagrammatic Theories. Physical Review Letters, 2021, 126, 257001.	7.8	8
58	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
59	Bond bipolarons: Sign-free Monte Carlo approach. Physical Review B, 2022, 105, .	3.2	7
60	Supertransport by Superclimbing Dislocations in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>He</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> : When All Dimensions Matter. Physical Review Letters, 2022, 128, .	7.8	7
61	Space- and time-crystallization effects in multicomponent superfluids. Physical Review B, 2020, 101, .	3.2	6
62	Quantum Monte Carlo Scheme to Study Coherent Tunneling. Physical Review Letters, 1999, 82, 5092-5095.	7.8	5
63	Rotational response of superconductors: Magnetorotational isomorphism and rotation-induced vortex lattice. Physical Review B, 2014, 89, .	3.2	5
64	Supersolidity of helium-4: Disordered scenarios. Physica B: Condensed Matter, 2009, 404, 521-523.	2.7	4
65	The turbulent matter field of ultracold atoms. Physics Magazine, 2009, 2, .	0.1	4
66	Halon: A quasiparticle featuring critical charge fractionalization. Physical Review B, 2018, 98, .	3.2	4
67	Stochastic lists: Sampling multivariable functions with population methods. Physical Review B, 2018, 98, .	3.2	4
68	Weak First-Order Superfluid-Solid Quantum Transitions and Deconfined Criticality. Progress of Theoretical Physics Supplement, 2005, 160, 337-350.	0.1	3
69	Vortex-phonon interaction in the Kosterlitz-Thouless theory. Physical Review B, 2006, 73, .	3.2	3
70	Grassmannization of classical models. New Journal of Physics, 2016, 18, 113025.	2.9	3
71	Quantum-to-classical correspondence in two-dimensional Heisenberg models. Physical Review B, 2020, 101, .	3.2	3
72	Disorder-induced quantum properties of solid 4He. Low Temperature Physics, 2020, 46, 459-464.	0.6	3

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73	Restoring a smooth function from its noisy integrals. Physical Review E, 2018, 97, 053305.	2.1	2
74	Kinetics of Strongly Non-equilibrium Bose-Einstein Condensation. , 2001, , 327-333.		2
75	A Critical Point. Physics Today, 2002, 55, 85-85.	0.3	1
76	The role of defects in Supersolid Helium-4. Physics Procedia, 2010, 7, 80-84.	1.2	1
77	Quantized magnetic flux and the magnetohalon effect in a critical superconductor. Physical Review B, 2018, 98, .	3.2	1
78	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
79	Anomalously small excitation gaps as precursors of dislocation core superfluidity in solid helium-4. Physical Review B, 2021, 104, .	3.2	0