Valery G Rousseau

List of Publications by Year
in descending order

55	1,270	361388 20	361001 35
papers	citations	h-index	g-index

55	55	55	771
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mott Domains of Bosons Confined on Optical Lattices. Physical Review Letters, 2002, 89, 117203.	7.8	264
2	Exact Numerical Study of Pair Formation with Imbalanced Fermion Populations. Physical Review Letters, 2008, 100, 116405.	7.8	95
3	Exact study of the one-dimensional boson Hubbard model with a superlattice potential. Physical Review B, 2006, 73, .	3.2	74
4	State diagrams for harmonically trapped bosons in optical lattices. Physical Review A, 2009, 79, .	2.5	65
5	Directed update for the stochastic Green function algorithm. Physical Review E, 2008, 78, 056707.	2.1	57
6	Stochastic Green function algorithm. Physical Review E, 2008, 77, 056705.	2.1	55
7	Magnetic and Superfluid Transitions in the One-Dimensional Spin-1 Boson Hubbard Model. Physical Review Letters, 2009, 102, 140402.	7.8	45
8	Phase diagram of bosons in a two-dimensional optical lattice with infinite-range cavity-mediated interactions. Physical Review B, 2017, 95, .	3.2	44
9	Competing Supersolid and Haldane Insulator Phases in the Extended One-Dimensional Bosonic Hubbard Model. Physical Review Letters, 2013, 110, 265303.	7.8	41
10	Supersolids in one-dimensional Bose-Fermi mixtures. Physical Review B, 2008, 78, .	3.2	29
11	Pair formation and collapse in imbalanced fermion populations with unequal masses. Europhysics Letters, 2009, 86, 47006.	2.0	29
12	Finite-temperature quantum Monte Carlo study of the one-dimensional polarized Fermi gas. Physical Review A, 2010, 82, .	2.5	28
13	Collective Oscillations of Strongly Correlated One-Dimensional Bosons on a Lattice. Physical Review Letters, 2005, 95, 110402.	7.8	26
14	Superfluid and Mott-insulator phases of one-dimensional Bose-Fermi mixtures. Physical Review A, 2008, 78, .	2.5	26
15	Interacting spin-1 bosons in a two-dimensional optical lattice. Physical Review B, 2013, 88, .	3.2	25
16	Feshbach-Einstein Condensates. Physical Review Letters, 2009, 102, 015301.	7.8	24
17	Competing phases, phase separation, and coexistence in the extended one-dimensional bosonic Hubbard model. Physical Review B, 2014, 90, .	3.2	23
18	Quantum phases of mixtures of atoms and molecules on optical lattices. Physical Review A, 2008, 77, .	2.5	22

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19	Canonical trajectories and critical coupling of the Bose-Hubbard Hamiltonian in a harmonic trap. Physical Review A, 2008, 78, .	2.5	22
20	Quantum Monte Carlo study of the visibility of one-dimensional Bose-Fermi mixtures. Physical Review A, 2008, 77, .	2.5	21
21	Ground-state phase diagram of spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:math>bosons in a two-dimensional optical lattice. Physical Review B, 2011, 84, .	3.2	20
22	Exotic phases of interacting<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-band bosons. Physical Review B, 2013, 87, .	3.2	19
23	Superfluid density in continuous and discrete spaces: Avoiding misconceptions. Physical Review B, 2014, 90, .	3.2	19
24	Cooling Atomic Gases With Disorder. Physical Review Letters, 2015, 115, 240402.	7.8	19
25	Ring exchange and phase separation in the two-dimensional boson Hubbard model. Physical Review B, 2005, 72, .	3.2	18
26	Phase Separation in the Two-Dimensional Bosonic Hubbard Model with Ring Exchange. Physical Review Letters, 2004, 93, 110404.	7.8	14
27	Pure Mott Phases in Confined Ultracold Atomic Systems. Physical Review Letters, 2010, 104, 167201.	7.8	14
28	Quantum Monte Carlo study of the Rabi-Hubbard model. European Physical Journal D, 2016, 70, 1.	1.3	12
29	Phase diagram of spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mfrac><mml:mrow><mml:mn>1</mml:mn></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:mfrac></mml:mrow></mml:math> in a one-dimensional optical lattice. Physical Review A, 2010, 82, .	2.5	11
30	Feshbach-Stabilized Insulator of Bosons in Optical Lattices. Physical Review Letters, 2015, 114, 195302.	7.8	11
31	Two-photon Rabi-Hubbard and Jaynes-Cummings-Hubbard models: Photon-pair superradiance, Mott insulator, and normal phases. Physical Review A, 2019, 100, .	2.5	11
32	Scaling properties of Tan's contact: Embedding pairs and correlation effect in the Tonks-Girardeau limit. Physical Review A, 2019, 100, .	2.5	10
33	Spin and charge dynamics of stripes in doped Mott insulators. Europhysics Letters, 2003, 63, 569-575.	2.0	9
34	Finite temperature phase diagram of spin-1/2 bosons in two-dimensional optical lattice. European Physical Journal B, 2012, 85, 1.	1.5	9
35	Phase diagram of the Bose-Hubbard model on a ring-shaped lattice with tunable weak links. Physical Review A, 2013, 87, .	2.5	9
36	One-dimensional Hubbard-Holstein model with finite-range electron-phonon coupling. Physical Review B, 2019, 99, .	3.2	7

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37	Complex phases in the doped two-species bosonic Hubbard model. Physical Review B, 2013, 88, .	3.2	6
38	Equilibrium and Dynamical Properties of the Boson Hubbard Model in One Dimension. Journal of Low Temperature Physics, 2005, 140, 313-332.	1.4	4
39	Bosonic Kondo-Hubbard model. Physical Review B, 2015, 92, .	3.2	4
40	Quantum and thermal phase transitions in a bosonic atom-molecule mixture in a two-dimensional optical lattice. Physical Review A, 2017, 95, .	2.5	4
41	Phase diagrams of antiferromagnetic spin-1 bosons on a square optical lattice with the quadratic Zeeman effect. Physical Review A, 2018, 97, .	2.5	4
42	Using off-diagonal confinement as a cooling method. Physical Review A, 2010, 82, .	2.5	3
43	Competing exotic quantum phases of spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mstyle scriptlevel="0" displaystyle="false"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:mstyle></mml:math>ultracold lattice bosons with extended spin interactions. Physical Review B, 2015, 92, .	3.2	3
44	Local density of the Bose-glass phase. Physical Review B, 2018, 98, .	3.2	3
45	Quantum membrane phases in synthetic lattices of cold molecules or Rydberg atoms. Physical Review A, 2022, 105, .	2.5	3
46	Optimized confinement of fermions in two dimensions. Physical Review B, 2012, 85, .	3.2	2
47	Bose-Hubbard model on a kagome lattice with sextic ring-exchange terms. Physical Review B, 2013, 87, .	3.2	2
48	Phase stability in the two-dimensional anisotropic boson Hubbard Hamiltonian. Physical Review B, 2013, 87, .	3.2	2
49	Competition between the Haldane insulator, superfluid and supersolid phases in the one-dimensional Bosonic Hubbard Model. Journal of Physics: Conference Series, 2015, 640, 012042.	0.4	2
50	Pairing in population imbalanced Fermion systems. Computer Physics Communications, 2011, 182, 2021-2024.	7.5	1
51	Phase Diagram and Visibility of Optically Trapped Bosons. AIP Conference Proceedings, 2006, , .	0.4	0
52	Phase separation in the two-dimensional boson Hubbard model with ring exchange. AIP Conference Proceedings, 2006, , .	0.4	0
53	Ferromagnetic phase in the polarized two-species bosonic Hubbard model. Physical Review B, 2014, 90, .	3.2	0
54	Bose-Hubbard model on a triangular lattice with diamond ring exchange. Physical Review B, 2016, 94, .	3.2	0

#	Article	IF	Citations
55	Magnetic phase transition in the ground-state phase diagram of binary bose gases in optical lattices. Europhysics Letters, 2021, 134, 16001.	2.0	0