Mariusz Gajda

List of Publications by Year
in descending order

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94	2,442	186265	214800
papers	citations	28 h-index	47 g-index

96	96	96	1374
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Non-standard Hubbard models in optical lattices: a review. Reports on Progress in Physics, 2015, 78, 066001.	20.1	284
2	Optical generation of vortices in trapped Bose-Einstein condensates. Physical Review A, 1999, 60, R3381-R3384.	2.5	181
3	Fourth Statistical Ensemble for the Bose-Einstein Condensate. Physical Review Letters, 1997, 79, 1789-1792.	7.8	125
4	Fluctuations of Bose-Einstein Condensate. Physical Review Letters, 1997, 78, 2686-2689.	7.8	89
5	Soliton Trains in Bose-Fermi Mixtures. Physical Review Letters, 2004, 93, 100401.	7.8	81
6	Classical fields approximation for bosons at nonzero temperatures. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, R1-R37.	1.5	80
7	Multi-mode description of an interacting Bose-Einstein condensate. Optics Express, 2001, 8, 92.	3.4	77
8	Stabilization of atoms in ultrastrong laser fields: A classical approach. Physical Review A, 1992, 46, 1638-1653.	2.5	68
9	Solitons as the Early Stage of Quasicondensate Formation during Evaporative Cooling. Physical Review Letters, 2011, 106, 135301.	7.8	68
10	Quantum Bose-Bose droplets at a dimensional crossover. Physical Review A, 2018, 98, .	2.5	63
11	Multimode Dynamics of a Coupled Ultracold Atomic-Molecular System. Physical Review Letters, 2001, 86, 1397-1401.	7.8	60
12	Thermodynamics of an interacting trapped Bose-Einstein gas in the classical field approximation. Physical Review A, 2002, 66, .	2.5	59
13	Fluctuations of the Weakly Interacting Bose-Einstein Condensate. Physical Review Letters, 1999, 82, 4376-4379.	7.8	52
14	Numerical studies of the dynamics of multiphoton processes with arbitrary field polarization: Methodological considerations. Physical Review A, 1997, 55, 2132-2143.	2.5	45
15	Resonant Einsteinâ€“de Haas Effect in a Rubidium Condensate. Physical Review Letters, 2007, 99, 130401.	7.8	44
16	Soluble model of many interacting quantum particles in a trap. Physical Review A, 2000, 61, .	2.5	41
17	Spontaneous Solitons in the Thermal Equilibrium of a Quasi-1D Bose Gas. Physical Review Letters, 2012, 109, 205302.	7.8	41
18	Pairing in a system of a few attractive fermions in a harmonic trap. Europhysics Letters, 2015, 109, 26005.	2.0	41

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19	Two-flavour mixture of a few fermions of different mass in a one-dimensional harmonic trap. New Journal of Physics, 2016, 18, 013030.	2.9	41
20	Towards a unified collective model for the nuclear quadrupole and octupole modes. Journal of Physics G: Nuclear Physics, 1982, 8, 787-819.	0.8	38
21	Probing the classical field approximationÂthermodynamics and decaying vortices. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, S96-S102.	1.4	38
22	Criterion for Bose-Einstein condensation in a harmonic trap in the case with attractive interactions. Physical Review A, 2006, 73, .	2.5	38
23	Generation of ultrashort pulses of harmonics. Physical Review A, 1996, 54, R1761-R1764.	2.5	37
24	Ionization of an excited hydrogen atom by a high-frequency circularly polarized pulsed field. Physical Review A, 1994, 50, 2528-2539.	2.5	31
25	Dynamics and decoherence of two cold bosons in a one-dimensional harmonic trap. Physical Review A, 2010, 82, .	2.5	29
26	Quantum Bose-Fermi droplets. SciPost Physics, 2019, 6, .	4.9	29
27	Optical generation of vortices in trapped Bose-Einstein condensates. Physical Review A, 2001, 64, .	2.5	28
28	Temperature-dependent Bogoliubov approximation in the classical field approach to weakly interacting Bose gases. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 2725-2738.	1.5	28
29	Phase fluctuations of a Bose-Einstein condensate in low-dimensional geometry. Physical Review A, 2005, 72, .	2.5	28
30	Bose statistics and classical fields. Physical Review A, 2009, 79, .	2.5	25
31	Single-shot simulations of dynamics of quantum dark solitons. Physical Review A, 2016, 94, .	2.5	24
32	Self-bound Boseâ€“Fermi liquids in lower dimensions. New Journal of Physics, 2019, 21, 073027.	2.9	24
33	Ionization of hydrogen atoms by intense vacuum ultraviolet radiation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 2245-2254.	1.5	22
34	Correspondence between dark solitons and the type II excitations of the Lieb-Liniger model. Physical Review A, 2015, 91, .	2.5	22
35	Monte Carlo method, classical fields and Bose statistics. Optics Communications, 2010, 283, 671-675.	2.1	21
36	Single-shot imaging of trapped Fermi gas. Europhysics Letters, 2016, 115, 20012.	2.0	21

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37	Tunable dipolar resonances and Einstein-de Haas effect in a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">Rb</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>87</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>-atom condensate. Physical Review A, 2011, 83, .	2.5	20
38	Spinor condensate of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">Rb</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>87</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>as a dipolar gas. Physical Review A, 2010, 81, .	2.5	19
39	Statistical properties of one-dimensional Bose gas. Physical Review A, 2011, 83, .	2.5	18
40	Competition between Bose-Einstein Condensation and Spin Dynamics. Physical Review Letters, 2016, 117, 185302.	7.8	18
41	Classical-field approximation for cold weakly interacting bosons without free parameters. Physical Review A, 2004, 70, .	2.5	17
42	Statistical properties of one-dimensional attractive Bose gas. Europhysics Letters, 2011, 96, 10011.	2.0	17
43	Tunneling-Induced Restoration of the Degeneracy and the Time-Reversal Symmetry Breaking in Optical Lattices. Physical Review Letters, 2013, 111, 215302.	7.8	17
44	Mechanism of the multiple ionisation of atoms by strong laser pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 1988, 21, L383-L389.	1.5	16
45	Superfluid fountain effect in a Bose-Einstein condensate. Physical Review A, 2012, 86, .	2.5	16
46	Diffusion in a system of a few distinguishable fermions in a one-dimensional double-well potential. Europhysics Letters, 2016, 113, 56003.	2.0	15
47	Decay of multiply charged vortices at nonzero temperatures. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 095301.	1.5	14
48	Thomas-Fermi atom in a static homogeneous electric field. Physical Review A, 1989, 40, 3475-3483.	2.5	13
49	On the stability of Boseâ€“Fermi mixtures. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, L215-L221.	1.5	13
50	Coherence properties of spinor condensates at finite temperatures. Physical Review A, 2007, 76, .	2.5	13
51	Fluctuations of a weakly interacting Bose-Einstein condensate. Europhysics Letters, 2009, 86, 10002.	2.0	12
52	Three-dimensional theory of the magneto-optical trap: Doppler cooling in the low-intensity limit. Physical Review A, 1994, 49, 4864-4875.	2.5	11
53	Constructing a classical field for a Bose-Einstein condensate in an arbitrary trapping potential: Quadrupole oscillations at nonzero temperatures. Physical Review A, 2010, 81, .	2.5	11
54	Two-component Bose-Hubbard model with higher-angular-momentum states. Physical Review A, 2012, 85, .	2.5	11

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55	Spin dynamics of two bosons in an optical lattice site: A role of anharmonicity and anisotropy of the trapping potential. Physical Review A, 2013, 88, .	2.5	11
56	On the observability of Pauli crystals in experiments with ultracold trapped Fermi gases. Scientific Reports, 2017, 7, 15004.	3.3	11
57	How Cold Fusion Can Be Catalyzed. Fusion Science and Technology, 1990, 18, 136-142.	0.6	10
58	Reactions of charged massive particles in a deuterium environment. Physical Review A, 1991, 44, 4345-4352.	2.5	10
59	Revisiting a stability problem of two-component quantum droplets. Physical Review A, 2021, 103, .	2.5	9
60	Destruction of a Bose-Einstein condensate by strong interactions. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 4003-4016.	1.5	8
61	Interaction of a hydrogen atom with an intense pulse of vacuum ultraviolet radiation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 1271-1277.	1.5	7
62	Formation of soliton trains in Boseâ€“Einstein condensates by temporal Talbot effect. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, L1-L7.	1.5	7
63	Dynamics of a relative superflow between a Bose-Einstein condensate and the thermal cloud. Physical Review A, 2006, 74, .	2.5	7
64	Experimentally Accessible Invariants Encoded in Interparticle Correlations of Harmonically Trapped Ultra-cold Few-Fermion Mixtures. Few-Body Systems, 2017, 58, 1.	1.5	6
65	On coherence of Bose field. Optics Express, 2001, 8, 106.	3.4	5
66	Free expansion of a Boseâ€“Einstein condensate in the presence of a thermal cloud. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 105303.	1.5	5
67	Zero-energy modes of two-component Boseâ€“Bose droplets. New Journal of Physics, 2021, 23, 033022.	2.9	5
68	Manifestation of relative phase in dynamics of two interacting Bose-Bose droplets. Physical Review Research, 2022, 4, .	3.6	5
69	From a nonlinear string to a weakly interacting Bose gas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2007, 40, 1465-1477.	1.5	4
70	Improving observability of the Einsteinâ€“de Haas effect in a rubidium condensate. Physical Review A, 2014, 90, .	2.5	4
71	Resonant dynamics of chromium condensates. Physical Review A, 2014, 89, .	2.5	4
72	Light scattering by an ultracold trapped atom. Physical Review A, 1996, 54, 928-942.	2.5	3

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73	Density fluctuations in a quasi-one-dimensional Bose gas as observed in free expansion. Physical Review A, 2015, 92, .	2.5	3
74	Bistability of Boseâ€“Fermi mixtures. New Journal of Physics, 2020, 22, 103025.	2.9	3
75	Pair-correlation function of a metastable helium Bose-Einstein condensate. Physical Review A, 2004, 69, .	2.5	2
76	Classical fields method for a relativistic interacting Bose gas. Physical Review D, 2009, 79, .	4.7	2
77	Creation of topological states of a Bose-Einstein condensate in a square plaquette of four optical traps. Physical Review A, 2011, 84, .	2.5	2
78	A Classical-Field Approach for Bose Gases. Cold Atoms, 2013, , 191-202.	0.3	2
79	Pauli Crystalsâ€“Interplay of Symmetries. Symmetry, 2020, 12, 1886.	2.2	2
80	Spin distillation cooling of ultracold Bose gases. Scientific Reports, 2021, 11, 6441.	3.3	2
81	Review of the Current Status of Cold Fusion. NATO ASI Series Series B: Physics, 1989, , 541-556.	0.2	2
82	Statistical Physics of Bose-Einstein Condensation. Acta Physica Polonica A, 2001, 100, 7-28.	0.5	2
83	Distillation of a one-dimensional Bose-Einstein condensate. Physical Review A, 2009, 79, .	2.5	1
84	Quasicondensation reexamined. Journal of Physics: Conference Series, 2013, 414, 012031.	0.4	1
85	Modelling quantum aspects of disruption of a white dwarf star by a black hole. Scientific Reports, 2021, 11, 2286.	3.3	1
86	Soluble Model of Interacting Bosons Trapped in Harmonic Potential: Quality of Bogoliubov Approximation. Acta Physica Polonica A, 2001, 100, 485-504.	0.5	1
87	Pauli crystals in harmonic trap and on a sphere. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 422, 127799.	2.1	1
88	Temperature effects in light scattering by two trapped ions. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1986, 1, 177-181.	1.0	0
89	Jovian limits on conventional cold fusion. Journal of Physics G: Nuclear and Particle Physics, 1991, 17, 653-661.	3.6	0
90	Mechanical forces in a laser beam. , 1993, 1711, 21.		0

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91	Novel Quantum Effects in Light Scattering from Cold Trapped Atoms. , 2002, , 295-300.		0
92	Harmonically Trapped Classical Gas under Critical Rotation. Acta Physica Polonica A, 2003, 104, 399-407.	0.5	0
93	Solitons in quasi one dimensional Bose gas. , 2013, , .		0
94	Atoms in a spin dependent optical potential: ground state topology and magnetization. New Journal of Physics, 2022, 24, 033041.	2.9	0