Erich J Mueller

List of Publications by Year
in descending order

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115 papers	3,609 citations	172207 29 h-index	138251 58 g-index
118 all docs	118 docs citations	118 times ranked	2252 citing authors

#	Article	IF	Citations
1	Spin-imbalance in a one-dimensional Fermi gas. Nature, 2010, 467, 567-569.	13.7	454
2	Fragmentation of Bose-Einstein condensates. Physical Review A, 2006, 74, .	1.0	244
3	Two-Component Bose-Einstein Condensates with a Large Number of Vortices. Physical Review Letters, 2002, 88, 180403.	2.9	176
4	Artificial electromagnetism for neutral atoms: Escher staircase and Laughlin liquids. Physical Review A, 2004, 70, .	1.0	170
5	High Temperature Expansion Applied to Fermions near Feshbach Resonance. Physical Review Letters, 2004, 92, 160404.	2.9	132
6	Quasi-One-Dimensional Polarized Fermi Superfluids. Physical Review Letters, 2007, 99, 250403.	2.9	123
7	Exact Parent Hamiltonian for the Quantum Hall States in a Lattice. Physical Review Letters, 2010, 105, 215303.	2.9	119
8	Superfluidity and mean-field energy loops: Hysteretic behavior in Bose-Einstein condensates. Physical Review A, 2002, 66, .	1.0	110
9	Quantum Monte Carlo study of one-dimensional trapped fermions with attractive contact interactions. Physical Review A, 2008, 78, .	1.0	105
10	Profiles of near-resonant population-imbalanced trapped Fermi gases. Physical Review A, 2006, 73, .	1.0	103
11	Detecting antiferromagnetism of atoms in an optical lattice via optical Bragg scattering. Physical Review A, 2010, 81, .	1.0	85
12	Surface Tension in Unitary Fermi Gases with Population Imbalance. Physical Review Letters, 2006, 97, 070402.	2.9	80
13	Spin textures in slowly rotating Bose-Einstein condensates. Physical Review A, 2004, 69, .	1.0	74
14	Floquet edge states with ultracold atoms. Physical Review A, 2014, 89, .	1.0	66
15	Optical-lattice Hamiltonians for relativistic quantum electrodynamics. Physical Review A, 2011, 83, .	1.0	65
16	Theory of bosons in two-leg ladders with large magnetic fields. Physical Review A, 2014, 89, .	1.0	61
17	Stability of a Floquet Bose-Einstein condensate in a one-dimensional optical lattice. Physical Review A, 2014, 90, .	1.0	57
18	Majorana fermions in one-dimensional spin-orbit-coupled Fermi gases. Physical Review A, 2012, 86, .	1.0	52

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19	Review of pseudogaps in strongly interacting Fermi gases. Reports on Progress in Physics, 2017, 80, 104401.	8.1	49
20	Local Versus Global Equilibration near the Bosonic Mott-Insulatorâ€“Superfluid Transition. Physical Review Letters, 2011, 106, 125301.	2.9	47
21	Non-Abelian Braiding of Lattice Bosons. Physical Review Letters, 2012, 108, 066802.	2.9	47
22	Finite-temperature collapse of a Bose gas with attractive interactions. Physical Review A, 2000, 62, .	1.0	42
23	Techniques to measure quantum criticality in cold atoms. Physical Review A, 2011, 84, .	1.0	37
24	Imaging of spinor gases. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, S115-S125.	0.6	36
25	Dynamics of correlations in a dilute Bose gas following an interaction quench. Physical Review A, 2013, 87, .	1.0	36
26	Vortex lattices of bosons in deep rotating optical lattices. Physical Review A, 2008, 77, .	1.0	34
27	Transverse collisional instabilities of a Bose-Einstein condensate in a driven one-dimensional lattice. Physical Review A, 2015, 91, .	1.0	34
28	Multiply connected Bose-Einstein-condensed alkali-metal gases:â€ƒCurrent-carrying states and their decay. Physical Review A, 1998, 57, R1505-R1508.	1.0	31
29	Evolution of the pseudogap in a polarized Fermi gas. Physical Review A, 2011, 83, .	1.0	31
30	Final-State Effects in the Radio Frequency Spectrum of Strongly Interacting Fermions. Physical Review Letters, 2008, 101, 060405.	2.9	28
31	Absence of pressure-driven supersolid flow at low frequency. Physical Review B, 2009, 80, .	1.1	28
32	On-site correlations in optical lattices: Band mixing to coupled quantum Hall puddles. Physical Review A, 2010, 81, .	1.0	27
33	Lattice bosons with infinite-range checkerboard interactions. Physical Review A, 2016, 94, .	1.0	27
34	Nonequilibrium fractional Hall response after a topological quench. Physical Review A, 2016, 94, .	1.0	27
35	Observation of a new superfluid phase for 3He embedded in nematically ordered aerogel. Nature Communications, 2016, 7, 12975.	5.8	27
36	Density Profile of a Harmonically Trapped Ideal Fermi Gas in Arbitrary Dimension. Physical Review Letters, 2004, 93, 190404.	2.9	26

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37	Wigner crystallization in inhomogeneous one-dimensional wires. Physical Review B, 2005, 72, .	1.1	26
38	Interpreting Torsional Oscillator Measurements: Effect of Shear Modulus and Supersolidity. Journal of Low Temperature Physics, 2012, 168, 175-193.	0.6	24
39	Vortex ring dynamics in trapped Bose-Einstein condensates. Physical Review A, 2013, 88, .	1.0	23
40	Anomalous spin segregation in a weakly interacting two-component Fermi gas. Physical Review A, 2009, 79, .	1.0	22
41	Fractional quantum Hall states in the vicinity of Mott plateaus. Physical Review A, 2010, 81, .	1.0	22
42	Theory of the normal-superfluid interface in population-imbalanced Fermi gases. Physical Review A, 2009, 79, .	1.0	21
43	Magnetic-field dependence of Raman coupling in alkali-metal atoms. Physical Review A, 2013, 87, .	1.0	20
44	Anomalous charge pumping in a one-dimensional optical superlattice. Physical Review A, 2015, 92, .	1.0	19
45	Realizing the Haldane Phase with Bosons in Optical Lattices. Physical Review Letters, 2018, 120, 085301.	2.9	18
46	Coherent generation of photonic fractional quantum Hall states in a cavity and the search for anyonic quasiparticles. Physical Review A, 2018, 97, .	1.0	18
47	Stability of bosonic atomic and molecular condensates near a Feshbach resonance. Physical Review A, 2008, 78, .	1.0	17
48	Fulde-Ferrell-Larkin-Ovchinnikov versus Bose-Fermi mixture in a polarized one-dimensional Fermi gas at a Feshbach resonance: A three-body study. Physical Review A, 2010, 81, .	1.0	17
49	Pairing, ferromagnetism, and condensation of a normal spin-1 Bose gas. Physical Review A, 2011, 84, .	1.0	17
50	Collective oscillations of a Fermi gas near a Feshbach resonance. Physical Review A, 2005, 72, .	1.0	16
51	Evolution of condensate fraction during rapid lattice ramps. Physical Review A, 2012, 85, .	1.0	16
52	Competing ground states of strongly correlated bosons in the Harper-Hofstadter-Mott model. Physical Review A, 2016, 93, .	1.0	16
53	Hyperfine spectra of trapped bosons in optical lattices. Physical Review A, 2007, 76, .	1.0	15
54	Finite-size scaling and the role of the thermodynamic ensemble in the transition temperature of a dilute Bose gas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 4561-4570.	0.6	14

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55	Vortices near the Mott phase of a trapped Bose-Einstein condensate. Physical Review A, 2009, 79, .	1.0	14
56	Stability of a Bose-Einstein condensate in a driven optical lattice: Crossover between weak and tight transverse confinement. Physical Review A, 2015, 92, .	1.0	14
57	Stirring trapped atoms into fractional quantum Hall puddles. Physical Review A, 2008, 78, .	1.0	13
58	Optical-field-dependent electron-electron scattering effects and gain generation in the intersubband transitions of n-doped quantum wells. Journal of Physics Condensed Matter, 1998, 10, 2489-2503.	0.7	12
59	Looking for Hofstadterâ€™s Butterfly in Cold Atoms. Physics Magazine, 2013, 6, .	0.1	12
60	Dimensional crossover in a spin-imbalanced Fermi gas. Physical Review A, 2016, 94, .	1.0	12
61	Commensurability and hysteretic evolution of vortex configurations in rotating optical lattices. Physical Review A, 2009, 79, .	1.0	11
62	Two-body recombination in a quantum-mechanical lattice gas: Entropy generation and probing of short-range magnetic correlations. Physical Review A, 2010, 82, .	1.0	11
63	Rewiring stabilizer codes. New Journal of Physics, 2018, 20, 083030.	1.2	11
64	Stripe formation in Bose-Einstein condensates with large numbers of vortices. Physical Review A, 2003, 67, .	1.0	10
65	Spin waves in a spin-1 normal Bose gas. Physical Review A, 2010, 81, .	1.0	10
66	Many-body physics in the radio-frequency spectrum of lattice bosons. Physical Review A, 2010, 81, .	1.0	10
67	Dynamics of correlations in shallow optical lattices. Physical Review A, 2013, 87, .	1.0	10
68	Heating from continuous number density measurements in optical lattices. Physical Review A, 2014, 90, .	1.0	10
69	Collective Modes of a Soliton Train in a Fermi Superfluid. Physical Review Letters, 2017, 118, 260402.	2.9	10
70	Evolution of coherence during ramps across the Mott-insulatorâ€“superfluid phase boundary. Physical Review A, 2016, 93, .	1.0	9
71	Core filling and snaking instability of dark solitons in spin-imbalanced superfluid Fermi gases. Physical Review A, 2017, 95, .	1.0	9
72	Thermal transport of helium-3 in a strongly confining channel. Nature Communications, 2020, 11, 4843.	5.8	9

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73	Unconventional valley-dependent optical selection rules and landau level mixing in bilayer graphene. Nature Communications, 2020, 11, 2941.	5.8	9
74	Vortex structures of a two-component Bose-Einstein condensate for large anisotropies. Physical Review A, 2011, 84, .	1.0	8
75	Pair Density Waves and Vortices in an Elongated Spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mn>2</mml:mn></mml:math>Fermi Gas. Physical Review Letters, 2012, 108, 245301.	2.9	8
76	Kinetics of Bose-Einstein condensation in a dimple potential. Physical Review A, 2015, 91, .	1.0	8
77	Variational study of polarons and bipolarons in a one-dimensional Bose lattice gas in both the superfluid and the Mott-insulator regimes. Physical Review A, 2013, 88, .	1.0	7
78	Absence of the twisted superfluid state in a mean-field model of bosons on a honeycomb lattice. Physical Review A, 2013, 87, .	1.0	7
79	Dynamics of pattern-loaded fermions in bichromatic optical lattices. Physical Review A, 2016, 93, .	1.0	7
80	Superfluidity in the one-dimensional Bose-Hubbard model. Physical Review B, 2022, 105, .	1.1	7
81	Even-odd correlation functions on an optical lattice. Physical Review A, 2010, 82, .	1.0	6
82	Domain-wall dynamics in a two-component Bose-Mott insulator. Physical Review A, 2010, 82, .	1.0	6
83	Role of interactions in time-of-flight expansion of atomic clouds from optical lattices. Physical Review A, 2010, 82, .	1.0	6
84	Quasiparticle dispersions and lifetimes in the normal state of the BCS-BEC crossover. Physical Review A, 2015, 91, .	1.0	6
85	Collisionless spin dynamics in a magnetic field gradient. Physical Review A, 2015, 91, .	1.0	6
86	Protocol to engineer Fulde-Ferrell-Larkin-Ovchinnikov states in a cold Fermi gas. Physical Review A, 2017, 96, .	1.0	6
87	Dynamics of Bose-Einstein recondensation in higher bands. Physical Review A, 2020, 101, .	1.0	6
88	Correlated insulators in twisted bilayer graphene. Physical Review B, 2021, 103, .	1.1	6
89	Driven-dissipative control of cold atoms in tilted optical lattices. Physical Review A, 2021, 103, .	1.0	6
90	Spin-Orbit Coupling Comes in From the Cold. Physics Magazine, 2012, 5, .	0.1	5

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91	Universal quantum computation with Majorana fermion edge modes through microwave spectroscopy of quasi-one-dimensional cold gases in optical lattices. Physical Review A, 2013, 88, .	1.0	5
92	Proposal to directly observe the Kondo effect through enhanced photoinduced scattering of cold fermionic and bosonic atoms. Physical Review A, 2016, 93, .	1.0	5
93	Path-Dependent Supercooling of the <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>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> Superfluid <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mstyle mathvariant="italic"><mml:mrow><mml:mi>A</mml:mi></m	2.9	5
94	Generic features of the spectrum of trapped polarized fermions. Physical Review A, 2008, 78, .	1.0	4
95	Influence of Film-Mediated Interactions on the Microwave and Radio Frequency Spectrum of Spin-Polarized Hydrogen on Helium Films. Physical Review Letters, 2008, 101, 165301.	2.9	4
96	Quantum dimer models emerging from large-spin ultracold atoms. Physical Review A, 2019, 99, .	1.0	4
97	Exact topological flat bands from continuum Landau levels. Physical Review A, 2020, 101, .	1.0	4
98	Transport in the two-dimensional Fermi-Hubbard model: Lessons from weak coupling. Physical Review B, 2021, 104, .	1.1	4
99	Candidate theories to explain the anomalous spectroscopic signatures of atomic H in molecular<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>H</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:ma Physical Review B, 2010, 82, .	1.1	3
100	Dispersion and wave-function symmetry in cold atoms experiencing artificial gauge fields. Physical Review A, 2012, 85, .	1.0	2
101	Study of Supersolidity and Shear Modulus Anomaly of4He in a Triple Compound Oscillator. Journal of Physics: Conference Series, 2012, 400, 012047.	0.3	2
102	Magnetic polarons in two-component hard-core bosons. Physical Review A, 2013, 87, .	1.0	2
103	Radio-frequency spectrum of fermions near a narrow Feshbach resonance. Physical Review A, 2013, 88, .	1.0	2
104	Corrections to the continuous time semiclassical coherent state path integral. European Physical Journal: Special Topics, 2015, 224, 591-596.	1.2	2
105	Collective dynamics and atom loss in bright-soliton matter waves. Physical Review A, 2019, 99, .	1.0	2
106	Emission of particles from a parametrically driven condensate in a one-dimensional lattice. Physical Review A, 2021, 104, .	1.0	2
107	Density Matrix Renormalization Group for Continuous Quantum Systems. Physical Review Letters, 2022, 128, .	2.9	2
108	Strong Staggered Flux Lattices for Cold Atoms. Physics Magazine, 2011, 4, .	0.1	1

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109	On the ladder. Nature Physics, 2014, 10, 554-555.	6.5	1
110	Disappearance of quasiparticles in a Bose lattice gas. Physical Review A, 2016, 94, .	1.0	1
111	Cooling quantum gases with entropy localization. New Journal of Physics, 2017, 19, 023045.	1.2	1
112	Drag in Bose-Fermi mixtures. Physical Review A, 2021, 103, .	1.0	1
113	Influence of sublattice bias on superfluid to Mott insulator transitions. Physical Review A, 2021, 103, .	1.0	1
114	Rotating Bose gas dynamically entering the lowest Landau level. Physical Review A, 2022, 105, .	1.0	1
115	Route to observing topological edge modes in ultracold fermions. Physical Review A, 2014, 89, .	1.0	0