Robert Seiringer

List of Publications by Year
in descending order

146	4,138	168829	156644
papers	citations	31 h-index	58 g-index

150	150	150	1446
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Polaron Models with Regular Interactions at Strong Coupling. Journal of Statistical Physics, 2022, 186, 1.	0.5	1
2	Two-particle bound states at interfaces and corners. Journal of Functional Analysis, 2022, 282, 109455.	0.7	0
3	Quantum Corrections to the Pekar Asymptotics of a Strongly Coupled Polaron. Communications on Pure and Applied Mathematics, 2021, 74, 544-588.	1.2	9
4	Persistence of the spectral gap for the Landauâ€“Pekar equations. Letters in Mathematical Physics, 2021, 111, 1.	0.5	9
5	Derivation of the Landauâ€“Pekar Equations in a Many-Body Mean-Field Limit. Archive for Rational Mechanics and Analysis, 2021, 240, 383-417.	1.1	5
6	Free energy asymptotics of the quantum Heisenberg spin chain. Letters in Mathematical Physics, 2021, 111, 31.	0.5	3
7	Correlation energy of a weakly interacting Fermi gas. Inventiones Mathematicae, 2021, 225, 885-979.	1.3	15
8	Semiclassical approximation and critical temperature shift for weakly interacting trapped bosons. Journal of Functional Analysis, 2021, 281, 109096.	0.7	2
9	Asymptotic expansion of low-energy excitations for weakly interacting bosons. Forum of Mathematics, Sigma, 2021, 9, .	0.3	19
10	The polaron at strong coupling. Reviews in Mathematical Physics, 2021, 33, 2060012.	0.7	9
11	The Strongly Coupled Polaron on the Torus: Quantum Corrections to the Pekar Asymptotics. Archive for Rational Mechanics and Analysis, 2021, 242, 1835.	1.1	4
12	The Landauâ€“Pekar equations : adiabatic theorem and accuracy. Analysis and PDE, 2021, 14, 2079-2100.	0.6	6
13	Landauâ€“Pekar equations and quantum fluctuations for the dynamics of a strongly coupled polaron. Pure and Applied Analysis, 2021, 3, 653-676.	0.4	6
14	Divergence of the Effective Mass of a Polaron in the Strong Coupling Limit. Journal of Statistical Physics, 2020, 180, 23-33.	0.5	12
15	Optimal Upper Bound for the Correlation Energy of a Fermi Gas in the Mean-Field Regime. Communications in Mathematical Physics, 2020, 374, 2097-2150.	1.0	20
16	The local density approximation in density functional theory. Pure and Applied Analysis, 2020, 2, 35-73.	0.4	23
17	The free energy of the two-dimensional dilute Bose gas. II. Upper bound. Journal of Mathematical Physics, 2020, 61, .	0.5	3
18	Emergence of Haldane Pseudo-Potentials in Systems with Short-Range Interactions. Journal of Statistical Physics, 2020, 181, 448-464.	0.5	12

#	Article	IF	Citations
19	Microscopic Derivation of the FrÃ¶hlich Hamiltonian for the Bose Polaron in the Mean-Field Limit. Annales Henri Poincare, 2020, 21, 4003-4025.	0.8	4
20	Quantum impurity model for anyons. Physical Review B, 2020, 102, .	1.1	13
21	Uniqueness and NonDegeneracy of Minimizers of the Pekar Functional on a Ball. SIAM Journal on Mathematical Analysis, 2020, 52, 605-622.	0.9	4
22	THE FREE ENERGY OF THE TWO-DIMENSIONAL DILUTE BOSE GAS. I.ÂLOWER BOUND. Forum of Mathematics, Sigma, 2020, 8, .	0.3	3
23	Grossâ€“Pitaevskii Limit of a Homogeneous Bose Gas at Positive Temperature. Archive for Rational Mechanics and Analysis, 2020, 236, 1217-1271.	1.1	12
24	Energy Contribution of a Point-Interacting Impurity in a Fermi Gas. Annales Henri Poincare, 2019, 20, 1325-1365.	0.8	2
25	Floating Wigner crystal with no boundary charge fluctuations. Physical Review B, 2019, 100, .	1.1	26
26	Boseâ€“Einstein Condensation in a Dilute, Trapped Gas at Positive Temperature. Communications in Mathematical Physics, 2019, 368, 723-776.	1.0	15
27	Introduction to the Special Collection: International Congress on Mathematical Physics (ICMP) 2018. Journal of Mathematical Physics, 2019, 60, .	0.5	0
28	Stability of the 2 + 2 Fermionic System with Point Interactions. Mathematical Physics Analysis and Geometry, 2018, 21, 1.	0.4	8
29	Fermionic behavior of ideal anyons. Letters in Mathematical Physics, 2018, 108, 2523-2541.	0.5	10
30	Angular self-localization of impurities rotating in a bosonic bath. Physical Review A, 2017, 95, .	1.0	10
31	Triviality of a model of particles with point interactions in the thermodynamic limit. Letters in Mathematical Physics, 2017, 107, 533-552.	0.5	2
32	Stability of a Fermionic NÂ+ 1 Particle System with Point Interactions. Communications in Mathematical Physics, 2017, 356, 329-355.	1.0	18
33	Superuidity and BEC in a Model of Interacting Bosons in a Random Potential. Journal of Physics: Conference Series, 2016, 691, 012016.	0.3	1
34	Ground states of large bosonic systemsÂ: the Grossâ€“Pitaevskii limit revisited. Analysis and PDE, 2016, 9, 459-485.	0.6	56
35	The Bardeenâ€“Cooperâ€“Schrieffer functional of superconductivity and its mathematical properties. Journal of Mathematical Physics, 2016, 57, .	0.5	34
36	Bogolubovâ€“Hartreeâ€“Fock Theory for Strongly Interacting Fermions in the Low Density Limit. Mathematical Physics Analysis and Geometry, 2016, 19, 1.	0.4	6

#	Article	IF	Citations
37	Periodic Striped Ground States in Ising Models with Competing Interactions. Communications in Mathematical Physics, 2016, 347, 983-1007.	1.0	19
38	The External Field Dependence of the BCS Critical Temperature. Communications in Mathematical Physics, 2016, 342, 189-216.	1.0	19
39	Incompatibility of Time-Dependent Bogoliubovâ€“de-Gennes and Ginzburgâ€“Landau Equations. Letters in Mathematical Physics, 2016, 106, 913-923.	0.5	5
40	Decay of correlations and absence of superfluidity in the disordered Tonksâ€“Girardeau gas. New Journal of Physics, 2016, 18, 035002.	1.2	18
41	Unconditional Uniqueness for the Cubic Grossâ€Pitaevskii Hierarchy via Quantum de Finetti. Communications on Pure and Applied Mathematics, 2015, 68, 1845-1884.	1.2	39
42	Note on a Family of Monotone Quantum Relative Entropies. Letters in Mathematical Physics, 2015, 105, 1449-1466.	0.5	3
43	Superfluid behavior of a Boseâ€“Einstein condensate in a random potential. New Journal of Physics, 2015, 17, 013022.	1.2	11
44	Collective Excitations of Bose Gases in the Mean-Field Regime. Archive for Rational Mechanics and Analysis, 2015, 215, 381-417.	1.1	29
45	Validity of the Spin-Wave Approximation for the Free Energy of the Heisenberg Ferromagnet. Communications in Mathematical Physics, 2015, 339, 279-307.	1.0	15
46	Translation-invariant quasi-free states for fermionic systems and the BCS approximation. Reviews in Mathematical Physics, 2014, 26, 1450012.	0.7	12
47	EXISTENCE OF GROUND STATES FOR NEGATIVE IONS AT THE BINDING THRESHOLD. Reviews in Mathematical Physics, 2014, 26, 1350021.	0.7	11
48	Strichartz inequality for orthonormal functions. Journal of the European Mathematical Society, 2014, 16, 1507-1526.	0.7	33
49	Equivalence of Two Definitions of the Effective Mass of a Polaron. Journal of Statistical Physics, 2014, 154, 51-57.	0.5	9
50	The Excitation Spectrum for Bose Fluids with Weak Interactions. Deutsche Mathematiker Vereinigung Jahresbericht, 2014, 116, 21-41.	0.4	0
51	Validity of spin-wave theory for the quantum Heisenberg model. Europhysics Letters, 2014, 108, 20003.	0.7	6
52	Bose gases, Boseâ€“Einstein condensation, and the Bogoliubov approximation. Journal of Mathematical Physics, 2014, 55, .	0.5	9
53	Formation of Stripes and Slabs Near the Ferromagnetic Transition. Communications in Mathematical Physics, 2014, 331, 333-350.	1.0	9
54	On the Mass Concentration for Boseâ€“Einstein Condensates with Attractive Interactions. Letters in Mathematical Physics, 2014, 104, 141-156.	0.5	138

#	Article	IF	Citations
55	On the Well-Posedness and Scattering for the Grossâ€“Pitaevskii Hierarchy via Quantum de Finetti. Letters in Mathematical Physics, 2014, 104, 871-891.	0.5	11
56	On the BCS gap equation for superfluid fermionic gases. , 2014, , .		1
57	The Excitation Spectrum for Weakly Interacting Bosons in a Trap. Communications in Mathematical Physics, 2013, 322, 559-591.	1.0	84
58	Condensation of interacting bosons in a random potential. European Physical Journal: Special Topics, 2013, 217, 103-107.	1.2	0
59	Hot topics in cold gases. Japanese Journal of Mathematics, 2013, 8, 185-232.	0.8	5
60	A positive density analogue of the Liebâ€“Thirring inequality. Duke Mathematical Journal, 2013, 162, .	0.8	26
61	Symmetry of Bipolaron Bound States for Small Coulomb Repulsion. Communications in Mathematical Physics, 2013, 319, 557-573.	1.0	6
62	Realization of stripes and slabs in two and three dimensions. Physical Review B, 2013, 88, .	1.1	8
63	MICROSCOPIC DERIVATION OF THE GINZBURG-LANDAU MODEL. , 2013, , 575-583.		1
64	DISORDERED BOSE EINSTEIN CONDENSATES WITH INTERACTION. , 2013, , 610-619.		4
65	GROUND STATE PROPERTIES OF MULTI-POLARON SYSTEMS. , 2013, , 477-485.		2
66	Microscopic derivation of Ginzburg-Landau theory. Journal of the American Mathematical Society, 2012, 25, 667-713.	1.9	72
67	The gap equation for spin-polarized fermions. Journal of Mathematical Physics, 2012, 53, .	0.5	9
68	QUANTUM HYPOTHESIS TESTING AND NON-EQUILIBRIUM STATISTICAL MECHANICS. Reviews in Mathematical Physics, 2012, 24, 1230002.	0.7	43
69	Disordered Boseâ€“Einstein condensates with interaction in one dimension. Journal of Statistical Mechanics: Theory and Experiment, 2012, 2012, P11007.	0.9	20
70	Further Implications of the Bessisâ€“Moussaâ€“Villani Conjecture. Journal of Statistical Physics, 2012, 149, 86-91.	0.5	1
71	Absence of bound states implies non-negativity of the scattering length. Journal of Spectral Theory, 2012, 2, 321-328.	0.4	2
72	Lieb-Thirring inequality for a model of particles with point interactions. Journal of Mathematical Physics, 2012, 53, 095201.	0.5	16

#	Article	IF	Citations
73	Binding of Polarons and Atoms at Threshold. Communications in Mathematical Physics, 2012, 313, 405-424.	1.0	11
74	Low Density Limit of BCS Theory and Boseâ€“Einstein Condensation of Fermion Pairs. Letters in Mathematical Physics, 2012, 100, 119-138.	0.5	11
75	The Scattering Length at Positive Temperature. Letters in Mathematical Physics, 2012, 100, 237-243.	0.5	4
76	Cold Quantum Gases and Boseâ€“Einstein Condensation. Lecture Notes in Mathematics, 2012, , 55-92.	0.1	3
77	Stability and absence of binding forÂmulti-polaron systems. Publications Mathematiques De L'Institut Des Hautes Etudes Scientifiques, 2011, 113, 39-67.	2.2	19
78	The Excitation Spectrum for Weakly Interacting Bosons. Communications in Mathematical Physics, 2011, 306, 565-578.	1.0	102
79	Energy Cost to Make a Hole in the Fermi Sea. Physical Review Letters, 2011, 106, 150402.	2.9	15
80	A Sharp Bound on Eigenvalues of SchrÃ¶dinger Operators on the Half-line with Complex-valued Potentials. , 2011, , 39-44.		30
81	EQUIVALENCE OF SOBOLEV INEQUALITIES AND LIEB-THIRRING INEQUALITIES. , 2010, , .		15
82	Asymptotic behavior of eigenvalues of SchrÃ¶dinger type operators with degenerate kinetic energy. Mathematische Nachrichten, 2010, 283, 489-499.	0.4	18
83	HOT TOPICS IN COLD GASES. , 2010, , .		3
84	Bipolaron and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>N</mml:mi></mml:math>-Polaron Binding Energies. Physical Review Letters, 2010, 104, 210402.	2.9	19
85	Sharp Fractional Hardy Inequalities in Half-Spaces. International Mathematical Series, 2010, , 161-167.	0.3	20
86	Rigorous upper bound on the critical temperature of dilute Bose gases. Physical Review B, 2009, 80, .	1.1	17
87	Yrast line of a rapidly rotating Bose gas: Gross-Pitaevskii regime. Physical Review A, 2009, 79, .	1.0	26
88	Probabilistic Coherence and Proper Scoring Rules. IEEE Transactions on Information Theory, 2009, 55, 4786-4792.	1.5	96
89	The Ground State Energy of the Weakly Interacting Bose Gas at High Density. Journal of Statistical Physics, 2009, 135, 915-934.	0.5	41
90	Strongly Correlated Phases in Rapidly Rotating Bose Gases. Journal of Statistical Physics, 2009, 137, 1040-1062.	0.5	31

#	Article	IF	Citations
91	Quantum Phases of Cold Bosons in an Optical Lattice. , 2009, , 805-822.		0
92	Hardy-Lieb-Thirring inequalities for fractional SchrÃ¶dinger operators. Journal of the American Mathematical Society, 2008, 21, 925-950.	1.9	184
93	The BCS Critical Temperature for Potentials with Negative Scattering Length. Letters in Mathematical Physics, 2008, 84, 99-107.	0.5	27
94	Ground State Energy of the Low Density Hubbard Model. Journal of Statistical Physics, 2008, 131, 1139-1154.	0.5	7
95	Free Energy of a Dilute Bose Gas: Lower Bound. Communications in Mathematical Physics, 2008, 279, 595-636.	1.0	24
96	The BCS Functional for General Pair Interactions. Communications in Mathematical Physics, 2008, 281, 349-367.	1.0	58
97	The Lieb-Liniger Model as a Limit of Dilute Bosons in Three Dimensions. Communications in Mathematical Physics, 2008, 284, 459-479.	1.0	18
98	Non-linear ground state representations and sharp Hardy inequalities. Journal of Functional Analysis, 2008, 255, 3407-3430.	0.7	252
99	Critical temperature and energy gap for the BCS equation. Physical Review B, 2008, 77, .	1.1	46
100	A NONLINEAR MODEL FOR RELATIVISTIC ELECTRONS AT POSITIVE TEMPERATURE. Reviews in Mathematical Physics, 2008, 20, 1283-1307.	0.7	18
101	SPECTRAL PROPERTIES OF THE BCS GAP EQUATION OF SUPERFLUIDITY. , 2008, , .		9
102	VORTICES AND SPONTANEOUS SYMMETRY BREAKING IN ROTATING BOSE GASES. , 2008, , .		0
103	MÃ¼llerâ€™s exchange-correlation energy in density-matrix-functional theory. Physical Review A, 2007, 76, .	1.0	44
104	Bose-Einstein Condensation and Spontaneous Symmetry Breaking. Reports on Mathematical Physics, 2007, 59, 389-399.	0.4	16
105	The critical temperature for the BCS equation at weak coupling. Journal of Geometric Analysis, 2007, 17, 559-567.	0.5	54
106	Stability of Relativistic Matter with Magnetic Fields for Nuclear Charges up to the Critical Value. Communications in Mathematical Physics, 2007, 275, 479-489.	1.0	25
107	On the failure of subadditivity of the Wignerâ€“Yanase entropy. Letters in Mathematical Physics, 2007, 80, 285-288.	0.5	9
108	Number of Bound States of SchrÃ¶dinger Operators with Matrix-Valued Potentials. Letters in Mathematical Physics, 2007, 82, 107-116.	0.5	6

#	Article	IF	Citations
109	Dilute, Trapped Bose Gases and Bose-Einstein Condensation. , 2006, , 249-274.		3
110	Liebâ€“Thirring Inequalities for SchrÃ¶dinger Operators with Complex-valued Potentials. Letters in Mathematical Physics, 2006, 77, 309-316.	0.5	65
111	The Thermodynamic Pressure of a Dilute Fermi Gas. Communications in Mathematical Physics, 2006, 261, 729-757.	1.0	20
112	Derivation of the Gross-Pitaevskii Equation for Rotating Bose Gases. Communications in Mathematical Physics, 2006, 264, 505-537.	1.0	140
113	Bose-Einstein Condensation as a Quantum Phase Transition in an Optical Lattice. , 2006, , 199-215.		4
114	A CORRELATION ESTIMATE FOR QUANTUM MANY-BODY SYSTEMS AT POSITIVE TEMPERATURE. Reviews in Mathematical Physics, 2006, 18, 233-253.	0.7	7
115	One-dimensional behavior of dilute Bose gases in traps. , 2006, , .		0
116	Ground-state energy of the low-density Fermi gas. Physical Review A, 2005, 71, .	1.0	36
117	The Quantum-Mechanical Many-Body Problem: The Bose Gas. , 2005, , 97-183.		3
118	Stronger subadditivity of entropy. Physical Review A, 2005, 71, .	1.0	24
119	Justification ofc-Number Substitutions in Bosonic Hamiltonians. Physical Review Letters, 2005, 94, 080401.	2.9	56
120	Equivalent Forms of the Bessisâ€“Moussaâ€“Villani Conjecture. Journal of Statistical Physics, 2004, 115, 185-190.	0.5	33
121	One-Dimensional Behavior of Dilute, Trapped Bose Gases. Communications in Mathematical Physics, 2004, 244, 347-393.	1.0	43
122	Bose-Einstein quantum phase transition in an optical lattice model. Physical Review A, 2004, 70, .	1.0	66
123	The Quantum-Mechanical Many-Body Problem: The Bose Gas. , 2004, , 351-435.		4
124	One-Dimensional Bosons in Three-Dimensional Traps. Physical Review Letters, 2003, 91, 150401.	2.9	100
125	Ground state asymptotics of a dilute, rotating gas. Journal of Physics A, 2003, 36, 9755-9778.	1.6	37
126	PoincarÃ© inequalities in punctured domains. Annals of Mathematics, 2003, 158, 1067-1080.	2.1	22

#	Article	IF	Citations
127	One-Dimensional Basons in Three-Dimensional Traps. , 2003, , 909-912.		0
128	Superfluidity in dilute trapped Bose gases. Physical Review B, 2002, 66, .	1.1	42
129	Proof of Bose-Einstein Condensation for Dilute Trapped Gases. Physical Review Letters, 2002, 88, 170409.	2.9	264
130	Gross-Pitaevskii Theory of the Rotating Bose Gas. Communications in Mathematical Physics, 2002, 229, 491-509.	1.0	62
131	General Decomposition of Radial Functions on Rn and Applications to N-Body Quantum Systems. Letters in Mathematical Physics, 2002, 61, 75-84.	0.5	31
132	Proof of Bose-Einstein Condensation for Dilute Trapped Gases. , 2002, , 899-902.		0
133	Superfluidity in dilute trapped Bose gases. , 2002, , 903-908.		6
134	Mass renormalization and energy level shift in non-relativistic QED. Advances in Theoretical and Mathematical Physics, 2002, 6, 847-871.	0.4	64
135	Atoms with Bosonic "Electronis" in Strong Magnetic Fields. Annales Henri Poincare, 2001, 2, 41-76.	0.8	5
136	A Discrete Density Matrix Theory for AtomsÂ¶in Strong Magnetic Fields. Communications in Mathematical Physics, 2001, 217, 229-248.	1.0	7
137	A Rigorous DerivationÂ¶of the Grossâ€“Pitaevskii Energy FunctionalÂ¶for a Two-dimensional Bose Gas. Communications in Mathematical Physics, 2001, 224, 17-31.	1.0	131
138	Title is missing!. Letters in Mathematical Physics, 2001, 55, 133-142.	0.5	7
139	On the maximal ionization of atoms in strong magnetic fields. Journal of Physics A, 2001, 34, 1943-1948.	1.6	9
140	Bosons in a Trap: Asymptotic Exactness of the Gross-Pitaevskii Ground State Energy Formula. , 2001, , 307-314.		2
141	On the Ordering of Energy Levels in Homogeneous Magnetic Fields. Letters in Mathematical Physics, 2000, 54, 213-226.	0.5	2
142	Bosons in a trap: A rigorous derivation of the Gross-Pitaevskii energy functional. Physical Review A, 2000, 61, .	1.0	304
143	Bosons in a trap: A rigorous derivation of the Gross-Pitaevskii energy functional. , 2000, , 759-771.		42
144	Statistical mechanics of theÂuniformÂelectronÂgas. Journal De L'Ecole Polytechnique - Mathematiques, 0, 5, 79-116.	0.0	22

#	Article	IF	Citations
145	The effective mass problem for the Landau-Pekar equations. Journal of Physics A: Mathematical and Theoretical, 0, , .	0.7	2
146	Bosonization of Fermionic Many-Body Dynamics. Annales Henri Poincare, 0, , 1.	0.8	13