Giancarlo Calvanese Strinati

List of Publications by Year
in descending order

112 papers	5,203 citations	109321 35 h-index	85541 71 g-index
112 all docs	112 docs citations	112 times ranked	2431 citing authors

#	Article	IF	Citations
1	Application of the Greenâ€™s functions method to the study of the optical properties of semiconductors. Rivista Del Nuovo Cimento, 1988, 11, 1-86.	5.7	412
2	Effects of dynamical screening on resonances at inner-shell thresholds in semiconductors. Physical Review B, 1984, 29, 5718-5726.	3.2	271
3	Observation of pseudogap behaviour in a strongly interacting Fermi gas. Nature Physics, 2010, 6, 569-573.	16.7	265
4	Dynamical aspects of correlation corrections in a covalent crystal. Physical Review B, 1982, 25, 2867-2888.	3.2	260
5	General form of the quantum-defect theory. Physical Review A, 1979, 19, 1485-1509.	2.5	248
6	The BCSâ€“BEC crossover: From ultra-cold Fermi gases to nuclear systems. Physics Reports, 2018, 738, 1-76.	25.6	188
7	Dynamical Shift and Broadening of Core Excitons in Semiconductors. Physical Review Letters, 1982, 49, 1519-1522.	7.8	186
8	Pseudogap and spectral function from superconducting fluctuations to the bosonic limit. Physical Review B, 2002, 66, .	3.2	174
9	BCS-BEC Crossover at Finite Temperature for Superfluid Trapped Fermi Atoms. Physical Review Letters, 2004, 92, 220404.	7.8	168
10	Strong-coupling limit in the evolution from BCS superconductivity to Bose-Einstein condensation. Physical Review B, 2000, 61, 15370-15381.	3.2	163
11	Evolution from BCS superconductivity to Bose condensation: analytic results for the crossover in three dimensions. European Physical Journal B, 1998, 1, 151-159.	1.5	159
12	Dynamical Correlation Effects on the Quasiparticle Bloch States of a Covalent Crystal. Physical Review Letters, 1980, 45, 290-294.	7.8	158
13	Evolution from BCS superconductivity to Bose condensation: Role of the parameterkFÎ¾. Physical Review B, 1994, 49, 6356-6359.	3.2	120
14	BCS-BEC crossover at finite temperature in the broken-symmetry phase. Physical Review B, 2004, 70, .	3.2	119
15	Quantitative Comparison between Theoretical Predictions and Experimental Results for the BCS-BEC Crossover. Physical Review Letters, 2004, 93, 100404.	7.8	118
16	Derivation of the Gross-Pitaevskii Equation for Condensed Bosons from the Bogoliubovâ€“deÂGennes Equations for Superfluid Fermions. Physical Review Letters, 2003, 91, 030401.	7.8	114
17	Evolution of the Normal State of a Strongly Interacting Fermi Gas from a Pseudogap Phase to a Molecular Bose Gas. Physical Review Letters, 2011, 106, 060402.	7.8	108
18	Evolution from BCS superconductivity to Bose condensation: Calculation of the zero-temperature phase coherence length. Physical Review B, 1996, 53, 15168-15192.	3.2	106

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19	Trapped Fermions with Density Imbalance in the Bose-Einstein Condensate Limit. Physical Review Letters, 2006, 96, 150404.	7.8	96
20	Doping-induced incommensurate antiferromagnetism in a Mott-Hubbard insulator. Physical Review B, 1991, 44, 7455-7465.	3.2	81
21	Thermal conductivity in disordered interacting-electron systems. Physical Review Letters, 1987, 59, 477-480.	7.8	68
22	Density-induced BCS to Bose-Einstein crossover. Physical Review B, 1999, 60, 12410-12418.	3.2	67
23	Effects of density imbalance on the BCS-BEC crossover in semiconductor electron-hole bilayers. Physical Review B, 2007, 75, .	3.2	63
24	Renormalization-group approach to the infrared behavior of a zero-temperature Bose system. Physical Review B, 2004, 69, .	3.2	57
25	Josephson Effect throughout the BCS-BEC Crossover. Physical Review Letters, 2007, 99, 040401.	7.8	57
26	Enhanced paraconductivity-like fluctuations in the radiofrequency spectra of ultracold Fermi atoms. Nature Physics, 2009, 5, 736-740.	16.7	55
27	Solution of the Bogoliubovâ€“de Gennes equations at zero temperature throughout the BCSâ€“BEC crossover: Josephson and related effects. Physics Reports, 2010, 488, 111-167.	25.6	55
28	Infrared Behavior of Interacting Bosons at Zero Temperature. Physical Review Letters, 1997, 78, 1612-1615.	7.8	52
29	Temperature and coupling dependence of the universal contact intensity for an ultracold Fermi gas. Physical Review A, 2010, 82, .	2.5	52
30	Broad vs. narrow Fano-Feshbach resonances in the BCS-BEC crossover with trapped Fermi atoms. Europhysics Letters, 2005, 69, 713-718.	2.0	49
31	Competition between Final-State and Pairing-Gap Effects in the Radio-Frequency Spectra of Ultracold Fermi Atoms. Physical Review Letters, 2008, 100, 010402.	7.8	44
32	Evolution from BCS superconductivity to Bose-Einstein condensation: Current correlation function in the broken-symmetry phase. Physical Review B, 2003, 68, .	3.2	43
33	Density and Spin Response of a Strongly Interacting Fermi Gas in the Attractive and Quasirepulsive Regime. Physical Review Letters, 2012, 108, 080401.	7.8	43
34	Impurities in covalent crystals: Exchange-correlation and local-field effects. Physical Review B, 1983, 27, 3735-3747.	3.2	37
35	Thermoelectric power in disordered electronic systems near the Anderson transition. Physical Review B, 1988, 37, 6663-6666.	3.2	35
36	Correct formulation of the 1/Nexpansion for the slave-boson approach within the functional integral. Physical Review B, 1994, 50, 2700-2703.	3.2	34

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37	Dispersions, weights, and widths of the single-particle spectral function in the normal phase of a Fermi gas. Physical Review B, 2012, 85, .	3.2	34
38	Gray solitons in a strongly interacting superfluid Fermi gas. New Journal of Physics, 2011, 13, 035010.	2.9	33
39	Entanglement between pairing and screening in the Gorkov-Melik-Barkhudarov correction to the critical temperature throughout the BCS-BEC crossover. Physical Review B, 2018, 97, .	3.2	33
40	Dimensional crossover in the magnetic properties of highly anisotropic antiferromagnets. Physical Review B, 1992, 45, 7872-7881.	3.2	32
41	Magnetic Field Effect on the Pseudogap Temperature within Precursor Superconductivity. Physical Review Letters, 2002, 89, 127003.	7.8	32
42	Shrinking of a condensed fermionic cloud in a trap approaching the Bose-Einstein condensation limit. Physical Review A, 2003, 68, .	2.5	31
43	Fermi gas throughout the BCS-BEC crossover: Comparative study of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>t</mml:mi></mml:math> -matrix approaches with various degrees of self-consistency. Physical Review B, 2019, 99, .	3.2	31
44	Beyond the Gutzwiller approximation in the slave-boson approach: Inclusion of fluctuations with the correct continuum limit of the functional integral. Physical Review Letters, 1993, 71, 3178-3181.	7.8	29
45	Functional-integral formulation of the slave-boson approach: Beyond the mean-field treatment with the correct continuum limit. Physics Reports, 1994, 241, 291-369.	25.6	29
46	Popov approximation for composite bosons in the BCS-BEC crossover. Physical Review B, 2005, 71, .	3.2	27
47	Temperature dependence of the pair coherence and healing lengths for a fermionic superfluid throughout the BCS-BEC crossover. Physical Review B, 2014, 89, .	3.2	27
48	Equation for the superfluid gap obtained by coarse graining the Bogoliubovâ€“de Gennes equations throughout the BCS-BEC crossover. Physical Review B, 2014, 89, .	3.2	25
49	Multipole wave functions for photoelectrons in crystals. III. The role of singular points in the band structure and the tails of the Wannier functions. Physical Review B, 1978, 18, 4104-4119.	3.2	24
50	Energy diffusion in disordered electronic systems near the Anderson transition. Physical Review B, 1987, 36, 2270-2276.	3.2	24
51	Gap equation with pairing correlations beyond the mean-field approximation and its equivalence to a Hugenholtz-Pines condition for fermion pairs. Physical Review B, 2018, 98, .	3.2	24
52	Comparison between a diagrammatic theory for the BCS-BEC crossover and quantum Monte Carlo results. Physical Review B, 2005, 72, .	3.2	23
53	Temperature dependence of a vortex in a superfluid Fermi gas. Physical Review B, 2013, 87, .	3.2	23
54	Pairing Fluctuation Effects on the Single-Particle Spectra for the Superconducting State. Physical Review Letters, 2004, 92, 110401.	7.8	22

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55	Extracting the Condensate Density from Projection Experiments with Fermi Gases. Physical Review Letters, 2005, 95, 010407.	7.8	22
56	Systematic investigation of the effects of disorder at the lowest order throughout the BCS-BEC crossover. Physical Review B, 2013, 88, .	3.2	20
57	Heat-transport Ward identity and effective Landau Fermi-liquid parameters in disordered systems. Physical Review B, 1988, 37, 9046-9048.	3.2	18
58	Dimensional crossover in the magnetic properties of highly anisotropic antiferromagnets. II. Paramagnetic phase. Physical Review B, 1993, 48, 957-964.	3.2	18
59	Pairing-gap, pseudogap, and no-gap phases in the radio-frequency spectra of a trapped unitary<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">Li</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>6</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>gas. Physical Review A, 2011, 84, .	2.5	18
60	Vortex arrays in neutral trapped Fermi gases through the BCSâ€“BEC crossover. Nature Physics, 2015, 11, 941-945.	16.7	17
61	Polaronic Effects on Exciton States with Different Angular Momenta. Physica Status Solidi (B): Basic Research, 1989, 153, 611-622.	1.5	15
62	Screening of a point charge in a semi-infinite semiconductor: Surface versus bulk contribution. Surface Science, 1986, 167, 363-380.	1.9	12
63	Antiferromagnetism ofCuO2layers within a slave-boson approach. Physical Review B, 1990, 41, 4838-4841.	3.2	12
64	Correct continuum limit of the functional-integral representation for the four-slave-boson approach to the Hubbard model: Paramagnetic phase. Physical Review B, 1995, 52, 2428-2462.	3.2	12
65	Beyond-mean-field description of a trapped unitary Fermi gas with mass and population imbalance. Physical Review A, 2021, 103, .	2.5	12
66	Critical behavior of the thermopower near the metal-insulator transition. Physical Review B, 1991, 43, 11088-11092.	3.2	11
67	From superconducting fluctuations to the bosonic limit in the response functions above the critical temperature. European Physical Journal B, 2002, 30, 161-173.	1.5	11
68	Pair correlations in the normal phase of an attractive Fermi gas. New Journal of Physics, 2020, 22, 083008.	2.9	11
69	Size shrinking of composite bosons for increasing density in the BCS to Bose-Einstein crossover. European Physical Journal B, 2000, 13, 637-642.	1.5	10
70	Far ultraviolet absorption spectrum of the K+ ion in KCl. Solid State Communications, 1974, 15, 1431-1434.	1.9	9
71	Many-body effects in the screening of substitutional impurities in covalent crystals. Physical Review B, 1982, 26, 2302-2305.	3.2	9
72	Kinetic equation for strongly disordered systems: Noninteracting electrons. Physical Review B, 1989, 40, 12237-12254.	3.2	9

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73	Pair fraction in a finite-temperature Fermi gas on the BEC side of the BCS-BEC crossover. Physical Review A, 2019, 99, .	2.5	9
74	Josephson effect at finite temperature along the BCS-BEC crossover. Physical Review B, 2020, 102, .	3.2	9
75	Multipole expansion of the density of states about a crystal cell. Journal of Mathematical Physics, 1976, 17, 434.	1.1	8
76	Multipole wave functions for photoelectrons in crystals. II. Examples of constant-energy-surface harmonics. Application to thesâ^'dbands of Cu. Physical Review B, 1978, 18, 4096-4103.	3.2	8
77	Electronic Thermal Conductivity in Disordered Systems near the Anderson Transition. Europhysics Letters, 1987, 4, 91-96.	2.0	8
78	Luttinger theorem and imbalanced Fermi systems. European Physical Journal B, 2017, 90, 1.	1.5	7
79	A Survey on the Crossover from BCS Superconductivity to Boseâ€Einstein Condensation. Physics Essays, 2000, 13, 427-436.	0.4	7
80	Kinetic equation for noninteracting electrons in the presence of strongly disordered magnetic impurities. Physical Review B, 1989, 39, 4824-4827.	3.2	6
81	Strong Fulde-Ferrell Larkin-Ovchinnikov pairing fluctuations in polarized Fermi systems. Physical Review Research, 2021, 3, .	3.6	6
82	Kinetic equation for strongly disordered systems. II. Interacting electrons. Physical Review B, 1991, 44, 6078-6089.	3.2	5
83	Revisiting the NoziÃ¨res and Schmitt-Rink approach for the evolution from the BCS superconductivity to Bose Condensation. Physica C: Superconductivity and Its Applications, 1994, 235-240, 2359-2360.	1.2	5
84	Comment on â€œBCS to Bose-Einstein crossover phase diagram at zero temperature for adx2â^'y2order parameter superconductor:â€,â€,Dependence on the tight-binding structureâ€• Physical Review B, 2003, 68, .	3.2	5
85	Time-dependent Gross-Pitaevskii equation for composite bosons as the strong-coupling limit of the fermionic broken-symmetry random-phase approximation. Physical Review A, 2004, 69, .	2.5	5
86	Optimizing the proximity effect along the BCS side of the BCS-BEC crossover. Physical Review B, 2018, 98, .	3.2	5
87	On the excitonicâ€polaron theory in angular variables. Journal of Mathematical Physics, 1987, 28, 981-985.	1.1	4
88	Dependence of surface screening in semiconductors on the short-range properties of the bulk dielectric function. Solid State Communications, 1987, 62, 633-635.	1.9	4
89	Spatial emergence of off-diagonal long-range order throughout the BCS-BEC crossover. Physical Review B, 2022, 105, .	3.2	4
90	Multipole wavefunctions for photoelectrons in crystals. IV. The irregular functions and the matching to an impurity. Journal of Mathematical Physics, 1979, 20, 188-194.	1.1	3

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91	Exact criterion for choosing the hopping operator in the four-slave-boson approach. Physical Review B, 1995, 52, 13707-13710.	3.2	3
92	Conserving and gapless approximations for the composite bosons in terms of the constituent fermions. Europhysics Letters, 2005, 71, 359-365.	2.0	3
93	Nonlocal equation for the superconducting gap parameter. Physical Review B, 2017, 96, .	3.2	3
94	Spin-wave spectrum of a two-dimensional itinerant-electron antiferromagnet based on aCuO2layer: Approximate mapping onto an effective Heisenberg model. Physical Review B, 1992, 45, 7816-7827.	3.2	2
95	Bound states in a superfluid vortex: A detailed study along the BCS-BEC crossover. Physical Review B, 2019, 99, .	3.2	2
96	On the effective non-Hermitian eigenvalue problems for resonant levels. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1984, 4, 397-410.	0.4	1
97	Kinetic equation for electrons in strongly disordered systems. Physica C: Superconductivity and Its Applications, 1988, 153-155, 697-698.	1.2	1
98	Anomalous pressure dependence of the La2CuO4 superexchange interaction: An evidence of band antiferromagnetism?. Solid State Communications, 1993, 87, 237-240.	1.9	1
99	Analytic results for the crossover from BCS superconductivity to Bose-Einstein condensation. Physica C: Superconductivity and Its Applications, 1997, 282-287, 1817-1818.	1.2	1
100	EVOLUTION FROM BCS SUPERCONDUCTIVITY TO BOSE-EINSTEIN CONDENSATION: MAPPING OF THE FERMIONIC ONTO A BOSONIC SYSTEM IN THE STRONG-COUPLING LIMIT. International Journal of Modern Physics B, 1999, 13, 667-673.	2.0	1
101	Relevance of the pair-pair interaction in the crossover from BCS to Bose-Einstein condensation. Physica C: Superconductivity and Its Applications, 2000, 341-348, 155-156.	1.2	1
102	Spin-wave spectrum of a two-dimensional itinerant electron system: Analytic results for the incommensurate spiral phase in the strong-coupling limit. European Physical Journal B, 2001, 19, 433-448.	1.5	1
103	Bipolaron Localization for Increasing Electronâ€“Phonon Coupling in a Small Cluster. Journal of Superconductivity and Novel Magnetism, 2001, 14, 169-174.	0.5	1
104	Alternative Derivation of the Coupled Set of Differential Equations for Excitons in Semiconductors with Degenerate Bands. Physica Status Solidi (B): Basic Research, 1983, 120, K115.	1.5	0
105	Core excitons in semiconductors with a decaying core hole. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1983, 117-118, 293-295.	0.9	0
106	Transport in Disordered Many-Body Systems. Physica Scripta, 1989, T29, 130-134.	2.5	0
107	Itinerant vs. localized antiferromagnetism of CuO 2 layers. Physica C: Superconductivity and Its Applications, 1989, 162-164, 785-786.	1.2	0
108	Incommensurate antiferromagnetism within a slave-boson approach to a two-dimensional Hubbard Hamiltonian. Physica C: Superconductivity and Its Applications, 1991, 185-189, 1691-1692.	1.2	0

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109	Implementing the four-slave-boson approach with the correct continuum limit of the functional integral. Physica C: Superconductivity and Its Applications, 1994, 235-240, 2255-2256.	1.2	0
110	Symmetry properties and renormalization group in the stable superfluid phase of bosons at zero temperature. Zeitschrift FÃ¼r Physik B-Condensed Matter, 1996, 103, 331-333.	1.1	0
111	Exact infrared behavior of superfluid interacting bosons at zero temperature. Physica C: Superconductivity and Its Applications, 1997, 282-287, 1821-1822.	1.2	0
112	Single-particle spectra and magnetic field effects within precursor superconductivity. Physica C: Superconductivity and Its Applications, 2004, 408-410, 317-318.	1.2	0