Adolfo Avella

List of Publications by Year
in descending order

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113	1,051	430754	552653
papers	citations	18 h-index	26 g-index

115	115	115	646
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Hubbard model within the equations of motion approach. Advances in Physics, 2004, 53, 537-768.	35.9	83
2	The Hubbard Model in the Two-Pole Approximation. International Journal of Modern Physics B, 1998, 12, 81-97.	1.0	38
3	Strongly Correlated Systems. Springer Series in Solid-state Sciences, 2013, , .	0.3	36
4	Quantum order by disorder in the Kitaev model on a triangular lattice. Physical Review B, 2015, 92, .	1.1	35
5	Equation of motion method for composite field operators. European Physical Journal B, 2003, 36, 37-56.	0.6	30
6	Resonant generation of coherent phonons in a superconductor by ultrafast optical pump pulses. Physical Review B, 2011, 84, .	1.1	30
7	Underdoped cuprate phenomenology in the two-dimensional Hubbard model within the composite operator method. Physical Review B, 2007, 75, .	1.1	26
8	Self-Potential data inversion through the integration of spectral analysis and tomographic approaches. Geophysical Journal International, 2016, 206, 1204-1220.	1.0	26
9	Emergent ultrafast phenomena in correlated oxides and heterostructures. Physica Scripta, 2017, 92, 034004.	1.2	26
10	Emery vs. Hubbard model for cuprate superconductors: a composite operator method study. European Physical Journal B, 2013, 86, 1.	0.6	23
11	Defect states and excitations in a Mott insulator with orbital degrees of freedom: Mott-Hubbard gap versus optical and transport gaps in doped systems. Physical Review B, 2013, 87, .	1.1	23
12	Localized vibrations in superconducting <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>YB</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">u</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>7</mml:mn></mml:msub></mml:mrow></mml:math> revea	1.1	23
13	Antiferromagnetic phase in the Hubbard model by means of the composite operator method. Physical Review B, 2001, 63, .	1.1	22
14	Bosonic sector of the two-dimensional Hubbard model studied within a two-pole approximation. Physical Review B, 2003, 67, .	1.1	21
15	Emergence of a metallic metastable phase induced by electrical current in Ca2RuO4. Physical Review B, 2019, 100, .	1.1	21
16	The 2-site Hubbard and $mathsf{t}$-$mathsf{J}$ models. European Physical Journal B, 2003, 36, 445-473.	0.6	20
17	Signatures of Enhanced Superconducting Phase Coherence in Optimally Doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Bi</mml:mi></mml:mrow><mml:mrow><mml:mn>2.</mml:mn></mml:mrow></mml:msub><mml:msub><mml:mi mathvariant="normal">Y</mml:mi></mml:mrow><mml:mrow><mml:mn>0.08</mml:mn></mml:mrow></mml:msub><mml:msub><m Physical Review Letters, 2019, 122, 067002.	2.9	20
18	The superconducting gap in the two-dimensional Hubbard model. Physica C: Superconductivity and Its Applications, 1997, 282-287, 1757-1758.	0.6	19

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19	Two-Scale Analysis of theSU(N)Kondo Model. Physical Review Letters, 2000, 85, 804-807.	2.9	17
20	Defects, Disorder, and Strong Electron Correlations in Orbital Degenerate, Doped Mott Insulators. Physical Review Letters, 2015, 115, 206403.	2.9	17
21	A minimal tight-binding model for the quasi-one-dimensional superconductor K₂Cr₃As₃. New Journal of Physics, 2019, 21, 063027.	1.2	17
22	The Hubbard model with intersite interaction within the Composite Operator Method. European Physical Journal B, 2004, 41, 149-162.	0.6	15
23	High-order correlation effects in the two-dimensional Hubbard model. Physical Review B, 2005, 72, .	1.1	15
24	Nonergodic dynamics of the extended anisotropic Heisenberg chain. Physical Review B, 2006, 74, .	1.1	15
25	Exact solution of the one-dimensional spin- $rac{mathsf 3}{mathsf 2}$ Ising model in magnetic field. European Physical Journal B, 2006, 50, 527-539.	0.6	14
26	Fingerprints of spin-orbital polarons and of their disorder in the photoemission spectra of doped Mott insulators with orbital degeneracy. Physical Review B, 2018, 97, .	1.1	14
27	Defect-Induced Orbital Polarization and Collapse of Orbital Order in Doped Vanadium Perovskites. Physical Review Letters, 2019, 122, 127206.	2.9	14
28	The two-dimensional t-t'-U model as a minimal model for cuprate materials. European Physical Journal B, 2001, 20, 303-311.	0.6	13
29	SCBA within composite operator method for the Hubbard model. Physica B: Condensed Matter, 2005, 359-361, 666-668.	1.3	13
30	Composite Operator Method Analysis of the Underdoped Cuprates Puzzle. Advances in Condensed Matter Physics, 2014, 2014, 1-29.	0.4	13
31	Tracking local magnetic dynamics via high-energy charge excitations in a relativistic Mott insulator. Physical Review B, 2016, 94, .	1.1	13
32	Spinâ€“orbit coupling effects on the electronic properties of the pressure-induced superconductor CrAs. European Physical Journal: Special Topics, 2019, 228, 631-641.	1.2	13
33	The overdoped regime in La2â^'xSrxCuO4. Solid State Communications, 1998, 108, 723-725.	0.9	12
34	Incommensurate spin fluctuations in the two-dimensional t-tâ€²-U model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 240, 235-240.	0.9	12
35	Self-energy corrections to the electronic spectrum of the Hubbard model. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 456-457.	1.0	12
36	The phase diagram of the extended anisotropic ferromagnetic-antiferromagnetic Heisenberg chain. European Physical Journal B, 2010, 77, 381-392.	0.6	12

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37	Disorder-sensitive pump-probe measurements on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mtext>Nd</mml:mtext><mml:mrow><mml:m Physical Review B, 2016, 94, .	1.1	12
38	The 1D Hubbard model within the Composite Operator Method. European Physical Journal B, 2002, 29, 399-417.	0.6	11
39	The energy-scale-dependent composite operator method for the single-impurity Anderson model. European Physical Journal B, 2004, 37, 465-471.	0.6	11
40	The Hubbard model beyond the two-pole approximation: a composite operator method study. European Physical Journal B, 2014, 87, 1.	0.6	11
41	Entanglement in the 1D extended anisotropic Heisenberg model. Physica B: Condensed Matter, 2008, 403, 1282-1283.	1.3	10
42	The half-filled Hubbard chain in the Composite Operator Method: A comparison with Bethe Ansatz. Europhysics Letters, 1998, 44, 328-334.	0.7	9
43	A theoretical analysis of the magnetic properties of. European Physical Journal B, 2003, 32, 27-33.	0.6	9
44	Optimizing the tight-binding parametrization of the quasi-one-dimensional superconductor K2Cr3As3. AIP Advances, 2018, 8, 101312.	0.6	9
45	XXZ-like phase in the F-AF anisotropic Heisenberg chain. European Physical Journal B, 2008, 66, 295-299.	0.6	8
46	Strong antiferromagnetic correlation effects on the momentum distribution function of the Hubbard model. Journal of Physics Condensed Matter, 2009, 21, 254209.	0.7	8
47	Correlation-induced band suppression in the two-orbital Hubbard model. Journal of Physics: Conference Series, 2011, 273, 012147.	0.3	8
48	The Composite Operator Method (COM). Springer Series in Solid-state Sciences, 2012, , 103-141.	0.3	8
49	Non-ergodicity of the 1D Heisenberg model. Physica Status Solidi (B): Basic Research, 2003, 236, 396-399.	0.7	7
50	Phase diagrams of half-filled 1D and 2D extended Hubbard model within COM. Journal of Physics and Chemistry of Solids, 2006, 67, 142-145.	1.9	7
51	The 2D Hubbard model and the pseudogap: a COM(SCBA) study. Journal of Physics Condensed Matter, 2007, 19, 255209.	0.7	7
52	Fermi surface and density of states in the two-dimensional t-tâ€²-U model. Physica C: Superconductivity and Its Applications, 1997, 282-287, 1759-1760.	0.6	6
53	Single-particle dispersion of the 2D pâ€“d model. Journal of Physics and Chemistry of Solids, 2011, 72, 384-387.	1.9	6
54	Filling and temperature dependence of the spin susceptibility of the two-dimensional Hubbard model in the superconducting d-wave phase. Journal of Physics and Chemistry of Solids, 2011, 72, 362-365.	1.9	6

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55	The 2D tâ€“J model: a proposal for an analytical study. Physica B: Condensed Matter, 2002, 312-313, 537-538.	1.3	5
56	Effects of two-site correlations in the Hubbard model. Physica C: Superconductivity and Its Applications, 2003, 388-389, 76-77.	0.6	5
57	The charge and spin sectors of the t-tâ€² Hubbard model. Physica C: Superconductivity and Its Applications, 2004, 408-410, 284-286.	0.6	5
58	The two-orbital Hubbard model and the OSMT. Physica C: Superconductivity and Its Applications, 2007, 460-462, 1068-1069.	0.6	5
59	COM framework for d-wave superconductivity in the 2D Hubbard model. Physica C: Superconductivity and Its Applications, 2010, 470, S930-S931.	0.6	5
60	Relationship between band populations and band structure in the three-band Hubbard model. Journal of Physics: Conference Series, 2011, 273, 012091.	0.3	5
61	Anomalous Self-Energy Features in the 2D Hubbard Model. Acta Physica Polonica A, 2008, 113, 395-398.	0.2	5
62	Effects of two-site composite excitations in the Hubbard model. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E311-E312.	1.0	4
63	Study of the spin- Hubbardâ€“Kondo lattice model by means of the Composite Operator Method. Physica B: Condensed Matter, 2006, 378-380, 700-701.	1.3	4
64	Anisotropic time-domain electronic response in cuprates driven by midinfrared pulses. Physical Review B, 2021, 104, .	1.1	4
65	Orbital rotations induced by charges of polarons and defects in doped vanadates. Physical Review B, 2021, 103, .	1.1	4
66	Antiferromagnetism in the 2D Hubbard model: phase transition and local quantities. Physica B: Condensed Matter, 2000, 284-288, 1577-1578.	1.3	3
67	Charge ordering in the extended Hubbard model in the ionic limit. Physica B: Condensed Matter, 2006, 378-380, 311-312.	1.3	3
68	Non-Fermi liquid behavior in the 2D Hubbard model within COM(SCBA). Journal of Magnetism and Magnetic Materials, 2007, 310, 999-1001.	1.0	3
69	T = 0 phase diagram of 1D extended anisotropic spin-Â½ Heisenberg model. Journal of Physics: Conference Series, 2009, 145, 012063.	0.3	3
70	Composite operator candidates for a study of thep-dmodel. Journal of Physics: Conference Series, 2012, 391, 012121.	0.3	3
71	Recurrence time distribution and temporal clustering properties of a cellular automaton modelling landslide events. Nonlinear Processes in Geophysics, 2013, 20, 1071-1078.	0.6	3
72	Electrical transport properties of sputtered Nd2â^'Ce CuO4Â± thin films. Physica B: Condensed Matter, 2018, 536, 742-746.	1.3	3

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73	Entanglement Properties and Phase Diagram of the Two-Orbital Atomic Hubbard Model. Acta Physica Polonica A, 2008, 113, 417-420.	0.2	3
74	Single-particle properties of the extended Hubbard model in the composite operator method. Journal of Physical Studies, 1998, 2, 232-235.	0.2	3
75	Doped spinâ€“orbital Mott insulators: Orbital dilution versus spinâ€“orbital polarons. Journal of Magnetism and Magnetic Materials, 2022, 543, 168616.	1.0	3
76	Local properties in the two-dimensional t-tâ€²-U model. Physica B: Condensed Matter, 1997, 230-232, 912-914.	1.3	2
77	Charge renormalization in the 1D Hubbard model. Physica B: Condensed Matter, 1999, 259-261, 753-754.	1.3	2
78	Ferromagnetic order for the 2D extended Hubbard model. Physica B: Condensed Matter, 2000, 281-282, 857-858.	1.3	2
79	Two-scale analysis of the Hubbard model. Physica B: Condensed Matter, 2003, 329-333, 955-956.	1.3	2
80	NEW COMPARISONS FOR LOCAL QUANTITIES OF THE TWO-DIMENSIONAL HUBBARD MODEL. International Journal of Modern Physics B, 2003, 17, 554-559.	1.0	2
81	4-pole analysis of the two-dimensional Hubbard model. Physica B: Condensed Matter, 2005, 359-361, 663-665.	1.3	2
82	Pseudogap opening in the 2D Hubbard model within COM (SCBA). Physica C: Superconductivity and Its Applications, 2007, 460-462, 1096-1097.	0.6	2
83	Strong spin-orbit effects in transition metal oxides with tetrahedral coordination. Physica B: Condensed Matter, 2018, 537, 184-187.	1.3	2
84	Localization of holes near charged defects in orbitally degenerate, doped Mott insulators. Physica B: Condensed Matter, 2018, 536, 738-741.	1.3	2
85	Single-particle properties of the Hubbard model in a novel three-pole approximation. Physica B: Condensed Matter, 2018, 536, 687-692.	1.3	2
86	BCS superconductors: The out-of-equilibrium response to a laser pulse. Physica B: Condensed Matter, 2018, 536, 713-716.	1.3	2
87	A generalized mean-field theory for the t-J model: the single-pole COM solution. European Physical Journal: Special Topics, 2019, 228, 659-668.	1.2	2
88	Local quantities for the 1D Hubbard model in the composite operator method. Journal of Physical Studies, 1998, 2, 228-231.	0.2	2
89	The composite operator method route to the 2D Hubbard model and the cuprates. Condensed Matter Physics, 2018, 21, 33701.	0.3	2
90	Ergodicity in strongly correlated systems. Condensed Matter Physics, 2006, 9, 485.	0.3	2

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91	Superconductivity induced by structural reorganization in the electron-doped cuprate Nd2â”xCexCuO4. Physical Review B, 2022, 105, .	1.1	2
92	Dynamical incommensurability in the 2D Hubbard model. Physica B: Condensed Matter, 1999, 259-261, 732-733.	1.3	1
93	The N-chain Hubbard model in the composite operator method. Physica B: Condensed Matter, 1999, 259-261, 1056-1057.	1.3	1
94	The van Hove scenario in the Hubbard model with correlated hopping. Physica C: Superconductivity and Its Applications, 1999, 317-318, 515-517.	0.6	1
95	Self-energy corrections within the Composite Operator Method. AIP Conference Proceedings, 2003, , .	0.3	1
96	The Hubbard model: bosonic excitations and zero-frequency constants. Physica C: Superconductivity and Its Applications, 2004, 408-410, 287-289.	0.6	1
97	Ergodicity of the extended anisotropic 1D Heisenberg model: Response at low temperatures. Journal of Magnetism and Magnetic Materials, 2007, 310, e480-e482.	1.0	1
98	A 4-pole approach to the Hubbard model within the Composite Operator Method. Journal of Physics: Conference Series, 2012, 391, 012151.	0.3	1
99	Quantum gap and spin-wave excitations in the Kitaev model on a triangular lattice. Physica B: Condensed Matter, 2018, 536, 350-352.	1.3	1
100	Strongly Correlated Electron Systems: An Operatorial Perspective. Physica B: Condensed Matter, 2018, 536, 359-363.	1.3	1
101	Coulomb localization in orbital degenerate, doped Mott insulators. AIP Advances, 2018, 8, .	0.6	1
102	Frustration-Driven Quantum Phase Transition in the 1D Extended Anisotropic Heisenberg Model. Acta Physica Polonica A, 2008, 113, 429-432.	0.2	1
103	Interplay Between Spin-Orbit Coupling and Structural Deformations in Heavy Transition-Metal Oxides with Tetrahedral Coordination. Acta Physica Polonica A, 2018, 133, 394-397.	0.2	1
104	Numerical studies of strongly correlated electronic systems. , 1998, , .		0
105	Analysis of thermodynamic quantities in the Hubbard model by means of the Composite Operator Method. Physica B: Condensed Matter, 2006, 378-380, 313-314.	1.3	0
106	Analysis of the magnetic response of the edge-sharing chain cuprate Li₂CuO₂within TMRG. Journal of Physics: Conference Series, 2010, 200, 022047.	0.3	0
107	Preface: Lectures on the Physics of Strongly Correlated Systems XVâ€”Fifteenth Training Course in the Physics of Strongly Correlated Systems. , 2011, , .		0
108	COM(3p) Solution of the 2D Hubbard Model: Momentum-Resolved Quantities. Journal of Superconductivity and Novel Magnetism, 2015, 28, 741-750.	0.8	0

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109	Fermi surface evolution of the 2D Hubbard model within a novel four-pole approximation. AIP Advances, 2018, 8, 101327.	0.6	0
110	Green's function formalism for highly correlated systems. Condensed Matter Physics, 2006, 9, 569.	0.3	0
111	Time evolution of energies and populations in germanium perturbed by a near-infrared pulse on the atto-second scale. Journal of Magnetism and Magnetic Materials, 2022, 546, 168785.	1.0	0
112	Local properties of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e182" altimg="si3.svg"><mml:mi>t</mml:mi></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e187" altimg="si119.svg"><mml:mi>J</mml:mi></mml:math> model in a two-pole approximation within COM. Journal of Magnetism and Magnetic Materials, 2022, 546, 168794.	1.0	0
113	Suppression of anisotropy of kinetic energy in doped vanadium perovskites by charged defects and spinâ€“orbital polarons. Journal of Magnetism and Magnetic Materials, 2022, , 169101.	1.0	0