Alessandro Toschi

List of Publications by Year
in descending order

99 papers	5,244 citations	61984 43 h-index	88630 70 g-index
102 all docs	102 docs citations	102 times ranked	3183 citing authors

#	Article	IF	Citations
1	Wien2wannier: From linearized augmented plane waves to maximally localized Wannier functions. Computer Physics Communications, 2010, 181, 1888-1895.	7.5	383
2	Dynamical vertex approximation: A step beyond dynamical mean-field theory. Physical Review B, 2007, 75, .	3.2	305
3	Diagrammatic routes to nonlocal correlations beyond dynamical mean field theory. Reviews of Modern Physics, 2018, 90, .	45.6	274
4	Turning a Nickelate Fermi Surface into a Cupratelike One through Heterostructuring. Physical Review Letters, 2009, 103, 016401.	7.8	229
5	Local electronic correlation at the two-particle level. Physical Review B, 2012, 86, .	3.2	154
6	A microscopic view on the Mott transition in chromium-doped V2O3. Nature Communications, 2010, 1, 105.	12.8	129
7	Fate of the false Mott-Hubbard transition in two dimensions. Physical Review B, 2015, 91, .	3.2	129
8	Comparing pertinent effects of antiferromagnetic fluctuations in the two- and three-dimensional Hubbard model. Physical Review B, 2009, 80, .	3.2	117
9	From Infinite to Two Dimensions through the Functional Renormalization Group. Physical Review Letters, 2014, 112, 196402.	7.8	112
10	Dichotomy between Large Local and Small Ordered Magnetic Moments in Iron-Based Superconductors. Physical Review Letters, 2010, 104, 197002.	7.8	111
11	Divergent Precursors of the Mott-Hubbard Transition at the Two-Particle Level. Physical Review Letters, 2013, 110, 246405.	7.8	98
12	Fluctuation Diagnostics of the Electron Self-Energy: Origin of the Pseudogap Physics. Physical Review Letters, 2015, 114, 236402.	7.8	95
13	Critical Properties of the Half-Filled Hubbard Model in Three Dimensions. Physical Review Letters, 2011, 107, 256402.	7.8	94
14	Energetic balance of the superconducting transition across the BCSâ€"Bose Einstein crossover in the attractive Hubbard model. Physical Review B, 2005, 72, .	3.2	86
15	Pairing and superconductivity from weak to strong coupling in the attractive Hubbard model. New Journal of Physics, 2005, 7, 7-7.	2.9	83
16	One-particle irreducible functional approach: A route to diagrammatic extensions of the dynamical mean-field theory. Physical Review B, 2013, 88, .	3.2	80
17	Local magnetic moments in iron and nickel at ambient and Earthâ€™s core conditions. Nature Communications, 2017, 8, 16062.	12.8	80
18	Conserved quantities ofSU(2)-invariant interactions for correlated fermions and the advantages for quantum Monte Carlo simulations. Physical Review B, 2012, 86, .	3.2	78

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19	Bands, resonances, edge singularities and excitons in core level spectroscopy investigated within the dynamical mean-field theory. Europhysics Letters, 2014, 108, 57004.	2.0	78
20	Dynamical vertex approximation in its parquet implementation: Application to Hubbard nanorings. Physical Review B, 2015, 91, .	3.2	78
21	Electronics with Correlated Oxides:<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SrVO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> a Mott Transistor. Physical Review Letters, 2015, 114, 246401.	7.8	77
22	Static versus dynamical mean-field theory of Mott antiferromagnets. Physical Review B, 2006, 73, .	3.2	74
23	Quasiparticle evolution and pseudogap formation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">V</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>: An Infrared spectroscopy study. Physical Review B, 2008, 77, .	3.2	73
24	Mottâ€“Hubbard transition in V₂O₃ revisited. Physica Status Solidi (B): Basic Research, 2013, 250, 1251-1264.	1.5	70
25	Inequivalent Routes across the Mott Transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="bold">V</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="bold">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Explored by X-Ray Absorption. Physical Review Letters, 2010, 104, 047401.	7.8	66
26	Impact of nonlocal correlations over different energy scales: A dynamical vertex approximation study. Physical Review B, 2016, 94, .	3.2	66
27	Electronic structure of nickelates: From two-dimensional heterostructures to three-dimensional bulk materials. Physical Review B, 2010, 82, .	3.2	65
28	Quantum dynamical screening of the local magnetic moment in Fe-based superconductors. Physical Review B, 2012, 86, .	3.2	65
29	Dynamical Vertex Approximation. Progress of Theoretical Physics Supplement, 2008, 176, 117-133.	0.1	64
30	Temperature Dependence of the Optical Spectral Weight in the Cuprates: Role of Electron Correlations. Physical Review Letters, 2005, 95, 097002.	7.8	62
31	Breakdown of Traditional Many-Body Theories for Correlated Electrons. Physical Review Letters, 2017, 119, 056402.	7.8	61
32	Effective on-site interaction for dynamical mean-field theory. Physical Review B, 2012, 86, .	3.2	60
33	Nonperturbative landscape of the Mott-Hubbard transition: Multiple divergence lines around the critical endpoint. Physical Review B, 2016, 94, .	3.2	59
34	Comparing quasiparticleGW+DMFT and LDA+DMFT for the test bed material SrVO3. Physical Review B, 2013, 88, .	3.2	56
35	Low-energy phase-only action in a superconductor: A comparison with theXYmodel. Physical Review B, 2004, 69, .	3.2	54
36	Spin State of Negative Charge-Transfer Material<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SrCoO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2012, 109, 117206.	7.8	54

#	Article	IF	Citations
37	High-frequency asymptotics of the vertex function: Diagrammatic parametrization and algorithmic implementation. Physical Review B, 2020, 102, .	3.2	53
38	Dynamical Vertex Approximation for Nanoscopic Systems. Physical Review Letters, 2010, 104, 246402.	7.8	50
39	Pseudogap of Metallic Layered Nickelate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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55	Efficient Bethe-Salpeter equation treatment in dynamical mean-field theory. Physical Review B, 2018, 97, .	3.2	31
56	Enhancement of theNaxCoO2thermopower due to electronic correlations. Physical Review B, 2010, 82, .	3.2	30
57	Screened moments and absence of ferromagnetism in FeAl. Physical Review B, 2015, 92, .	3.2	29
58	Dynamical vertex approximation for the two-dimensional Hubbard model. Journal of Magnetism and Magnetic Materials, 2016, 400, 107-111.	2.3	29
59	Fingerprints of the Local Moment Formation and its Kondo Screening in the Generalized Susceptibilities of Many-Electron Problems. Physical Review Letters, 2021, 126, 056403.	7.8	29
60	Kinks in the Electronic Specific Heat. Physical Review Letters, 2009, 102, 076402.	7.8	28
61	Quantum Criticality in the Two-Dimensional Periodic Anderson Model. Physical Review Letters, 2019, 122, 227201.	7.8	26
62	Boson-exchange parquet solver for dual fermions. Physical Review B, 2020, 102, .	3.2	26
63	Coherence length in superconductors from weak to strong coupling. Physical Review B, 2002, 66, .	3.2	25
64	Dynamical vertex approximation for the attractive Hubbard model. Physical Review B, 2019, 99, .	3.2	25
65	Correlation effects in transport properties of interacting nanostructures. Physical Review B, 2012, 86, .	3.2	24
66	Attractive Effect of a Strong Electronic Repulsion: The Physics of Vertex Divergences. Physical Review Letters, 2020, 125, 196403.	7.8	24
67	Effective magnetic correlations in hole-doped graphene nanoflakes. Physical Review B, 2016, 94, .	3.2	23
68	Evolution of the electronic structure of a Mott system across its phase diagram: X-ray absorption spectroscopy study of (V<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML") Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 237 T	3.2	22
69	xmlns:mml="http://www.w3.org/1998/Math Interplay between local response and vertex divergences in many-fermion systems with on-site attraction. Physical Review B, 2020, 101, .	3.2	22
70	Characteristic Timescales of the Local Moment Dynamics in Hundâ€™s Metals. Physical Review Letters, 2020, 125, 086402.	7.8	21
71	Effects of electronic correlations and disorder on the thermopower of Na<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>CoO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2011, 84, .	3.2	20
72	High-Temperature Optical Spectral Weight and Fermi-liquid Renormalization in Bi-Based Cuprate Superconductors. Physical Review Letters, 2010, 105, 077002.	7.8	19

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73	How to read between the lines of electronic spectra: the diagnostics of fluctuations in strongly correlated electron systems. Journal of Physics Condensed Matter, 2021, 33, 214001.	1.8	19
74	Dipole matrix element approach versus Peierls approximation for optical conductivity. Physical Review B, 2012, 85, .	3.2	18
75	Single-boson exchange representation of the functional renormalization group for strongly interacting many-electron systems. Physical Review Research, 2022, 4, .	3.6	15
76	Optical sum rule anomalies in the cuprates: Interplay between strong correlation and electronic band structure. Physical Review B, 2008, 77, .	3.2	14
77	woptic: Optical conductivity with Wannier functions and adaptive k-mesh refinement. Computer Physics Communications, 2016, 202, 1-11.	7.5	14
78	Atomic and itinerant effects at the transition-metal x-ray absorption<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>K</mml:mi></mml:math>pre-edge exemplified in the case of V<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:	3.2	13
79	Phase fluctuations in superconductors: From Galilean invariant to quantumXYmodels. Physical Review B, 2001, 64, .	3.2	12
80	Fulfillment of sum rules and Ward identities in the multiloop functional renormalization group solution of the Anderson impurity model. Physical Review Research, 2022, 4, .	3.6	12
81	Detecting a preformed pair phase: Response to a pairing forcing field. Physical Review B, 2016, 94, .	3.2	11
82	Comparative ab initio study of the structural, electronic, magnetic, and dynamical properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>LiOsO</mml:mi><mml:mn>3</mml:mn></mml:msub></m and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NaOsO</mml:mi><mml:mn>3</mml:mn></mml:msub></ Physical Review Materials, 2020, 4, .	2.4	11
83	Orbital characters of three-dimensional Fermi surfaces in Eu2â^'xSrxNiO4as probed by soft-x-ray angle-resolved photoemission spectroscopy. Physical Review B, 2011, 84, .	3.2	10
84	Complementary views on electron spectra: From fluctuation diagnostics to real-space correlations. Physical Review B, 2018, 97, .	3.2	10
85	Osmates on the Verge of a Hundâ€™s-Mott Transition: The Different Fates of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>NaOsO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>LiOsO</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn> Physical Review Letters, 2020, 125, 166402.	7.8	10
86	Long-term memory magnetic correlations in the Hubbard model: A dynamical mean-field theory analysis. SciPost Physics, 2022, 12, .	4.9	10
87	Dynamical vertex approximation for many-electron systems with spontaneously broken SU(2) symmetry. Physical Review B, 2021, 104, .	3.2	9
88	Anisotropy of electronic correlations: On the applicability of local theories to layered materials. Physical Review B, 2021, 103, .	3.2	8
89	Kinks in the periodic Anderson model. Physical Review B, 2012, 86, .	3.2	7
90	Enhancement of the effective disorder potential and thermopower in NaxCoO2through electron-phonon coupling. Physical Review B, 2012, 86, .	3.2	6

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91	Resistivity Exponents in 3D Dirac Semimetals From Electron-Electron Interaction. Physical Review Letters, 2021, 126, 206601.	7.8	5
92	Quasiparticle dephasing time in disorderedd-wave superconductors. Physical Review B, 2005, 72, .	3.2	4
93	Kinks: Fingerprints of strong electronic correlations. Journal of Physics: Conference Series, 2010, 200, 012207.	0.4	4
94	Spectral properties of the Mott Hubbard insulator (Cr_{0.011}V_{0.989})₂O₃calculated by LDA+DMFT. Journal of Physics: Conference Series, 2010, 200, 012208.	0.4	3
95	Doping-induced insulator-metal transition in the Lifshitz magnetic insulator NaOsO₃. Journal of Physics Condensed Matter, 2019, 31, 244002.	1.8	3
96	Electronic correlations in V₂O₃studied with K-edge X-ray absorption spectroscopy. Journal of Physics: Conference Series, 2009, 190, 012092.	0.4	2
97	Title is missing!. Journal of Superconductivity and Novel Magnetism, 2002, 15, 517-521.	0.5	1
98	ToschietÂal.Reply:. Physical Review Letters, 2010, 104, .	7.8	1
99	Optical spectral weight anomalies and strong correlation. Physica C: Superconductivity and Its Applications, 2007, 460-462, 1045-1046.	1.2	0