

Giuseppe Carleo

List of Publications by Year in descending order

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Version: 2024-02-01

43
papers

5,581
citations

201575

27
h-index

276775

41
g-index

44
all docs

44
docs citations

44
times ranked

4250
citing authors

#	ARTICLE	IF	CITATIONS
1	Solving the quantum many-body problem with artificial neural networks. <i>Science</i> , 2017, 355, 602-606.	6.0	1,307
2	Machine learning and the physical sciences. <i>Reviews of Modern Physics</i> , 2019, 91, .	16.4	1,245
3	Neural-network quantum state tomography. <i>Nature Physics</i> , 2018, 14, 447-450.	6.5	521
4	Quantum Simulators: Architectures and Opportunities. <i>PRX Quantum</i> , 2021, 2, .	3.5	229
5	Quantum Natural Gradient. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 4, 269.	0.0	200
6	Neural-Network Approach to Dissipative Quantum Many-Body Dynamics. <i>Physical Review Letters</i> , 2019, 122, 250502.	2.9	161
7	Localization and Glassy Dynamics Of Many-Body Quantum Systems. <i>Scientific Reports</i> , 2012, 2, 243.	1.6	145
8	Symmetries and Many-Body Excitations with Neural-Network Quantum States. <i>Physical Review Letters</i> , 2018, 121, 167204.	2.9	127
9	Fermionic neural-network states for ab-initio electronic structure. <i>Nature Communications</i> , 2020, 11, 2368.	5.8	121
10	Restricted Boltzmann machines in quantum physics. <i>Nature Physics</i> , 2019, 15, 887-892.	6.5	117
11	Deep Autoregressive Models for the Efficient Variational Simulation of Many-Body Quantum Systems. <i>Physical Review Letters</i> , 2020, 124, 020503.	2.9	117
12	Constructing exact representations of quantum many-body systems with deep neural networks. <i>Nature Communications</i> , 2018, 9, 5322.	5.8	111
13	Two-dimensional frustrated J_1 - J_2 Heisenberg model studied with neural network quantum states. <i>Physical Review B</i> , 2019, 100, .		
14	Light-cone effect and supersonic correlations in one- and two-dimensional bosonic superfluids. <i>Physical Review A</i> , 2014, 89, .	1.0	90
15	Nonstoquastic Hamiltonians and quantum annealing of an Ising spin glass. <i>Physical Review B</i> , 2017, 95, .	1.1	69
16	NetKet: A machine learning toolkit for many-body quantum systems. <i>SoftwareX</i> , 2019, 10, 100311.	1.2	65
17	Quench-Induced Breathing Mode of One-Dimensional Bose Gases. <i>Physical Review Letters</i> , 2014, 113, 035301.	2.9	64
18	Protected quasilocalty in quantum systems with long-range interactions. <i>Physical Review A</i> , 2015, 92, .	1.0	58

#	ARTICLE	IF	CITATIONS
19	An efficient quantum algorithm for the time evolution of parameterized circuits. Quantum - the Open Journal for Quantum Science, 0, 5, 512.	0.0	55
20	Precise measurement of quantum observables with neural-network estimators. Physical Review Research, 2020, 2, .	1.3	53
21	Learning hard quantum distributions with variational autoencoders. Npj Quantum Information, 2018, 4, .	2.8	49
22	Universal scaling laws for correlation spreading in quantum systems with short- and long-range interactions. Physical Review B, 2018, 98, .	1.1	48
23	Mott transition for strongly interacting one-dimensional bosons in a shallow periodic potential. Physical Review A, 2016, 93, .	1.0	47
24	Spreading of correlations in exactly solvable quantum models with long-range interactions in arbitrary dimensions. New Journal of Physics, 2016, 18, 093002.	1.2	44
25	Classical variational simulation of the Quantum Approximate Optimization Algorithm. Npj Quantum Information, 2021, 7, .	2.8	42
26	Broken-Symmetry Ground States of the Heisenberg Model on the Pyrochlore Lattice. Physical Review X, 2021, 11, .	2.8	40
27	Deep Learning the Hohenberg-Kohn Maps of Density Functional Theory. Physical Review Letters, 2020, 125, 076402.	2.9	38
28	Simultaneous Perturbation Stochastic Approximation of the Quantum Fisher Information. Quantum - the Open Journal for Quantum Science, 0, 5, 567.	0.0	38
29	Variational Monte Carlo Calculations of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline">A \hat{\rho}^4 \rangle$ Nuclei with an Artificial Neural-Network Correlator Ansatz. Physical Review Letters, 2021, 127, 022502.	2.9	37
30	Universal Superfluid Transition and Transport Properties of Two-Dimensional Dirty Bosons. Physical Review Letters, 2013, 111, 050406.	2.9	30
31	Itinerant ferromagnetic phase of the Hubbard model. Physical Review B, 2011, 83, .	1.1	26
32	Phases of two-dimensional spinless lattice fermions with first-quantized deep neural-network quantum states. Physical Review B, 2020, 102, .	1.1	25
33	Bose-Einstein Condensation in Quantum Glasses. Physical Review Letters, 2009, 103, 215302.	2.9	21
34	Unbiased Monte Carlo cluster updates with autoregressive neural networks. Physical Review Research, 2021, 3, .	1.3	20
35	Neural-network quantum states for periodic systems in continuous space. Physical Review Research, 2022, 4, .	1.3	18
36	Unitary Dynamics of Strongly Interacting Bose Gases with the Time-Dependent Variational Monte Carlo Method in Continuous Space. Physical Review X, 2017, 7, .	2.8	16

#	ARTICLE	IF	CITATIONS
37	Gauge Equivariant Neural Networks for Quantum Lattice Gauge Theories. Physical Review Letters, 2021, 127, 276402.	2.9	14
38	Reptation quantum Monte Carlo algorithm for lattice Hamiltonians with a directed-update scheme. Physical Review E, 2010, 82, 046710.	0.8	13
39	Nuclei with Up to $\vec{A}=6$ Nucleons with Artificial Neural Network Wave Functions. Few-Body Systems, 2022, 63, 1.	0.7	13
40	Natural evolution strategies and variational Monte Carlo. Machine Learning: Science and Technology, 2021, 2, 02LT01.	2.4	12
41	Ground state phase diagram of the one-dimensional Bose-Hubbard model from restricted Boltzmann machines. Journal of Physics: Conference Series, 2019, 1290, 012005.	0.3	11
42	Role of stochastic noise and generalization error in the time propagation of neural-network quantum states. SciPost Physics, 2022, 12, .	1.5	9
43	Zero-temperature dynamics of solid $\langle \mathbf{H} \rangle$ from quantum Monte Carlo simulations. Physical Review B, 2009, 80, .	1.1	8