

Guifre Vidal

List of Publications by Year in descending order

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53
papers

7,455
citations

147801

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175258

52
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53
all docs

53
docs citations

53
times ranked

3502
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient Classical Simulation of Slightly Entangled Quantum Computations. Physical Review Letters, 2003, 91, 147902.	7.8	1,595
2	Efficient Simulation of One-Dimensional Quantum Many-Body Systems. Physical Review Letters, 2004, 93, 040502.	7.8	1,231
3	Entanglement monotones. Journal of Modern Optics, 2000, 47, 355-376.	1.3	574
4	Mixed-State Dynamics in One-Dimensional Quantum Lattice Systems: A Time-Dependent Superoperator Renormalization Algorithm. Physical Review Letters, 2004, 93, 207205.	7.8	474
5	Robustness of entanglement. Physical Review A, 1999, 59, 141-155.	2.5	445
6	Entanglement of Pure States for a Single Copy. Physical Review Letters, 1999, 83, 1046-1049.	7.8	300
7	Constructing local integrals of motion in the many-body localized phase. Physical Review B, 2015, 91, .	3.2	224
8	Simulation of strongly correlated fermions in two spatial dimensions with fermionic projected entangled-pair states. Physical Review B, 2010, 81, .	3.2	220
9	Role of entanglement and correlations in mixed-state quantum computation. Physical Review A, 2007, 75, .	2.5	219
10	Tensor network states and algorithms in the presence of a global U(1) symmetry. Physical Review B, 2011, 83, .	3.2	175
11	Local description of quantum inseparability. Physical Review A, 1998, 58, 826-830.	2.5	160
12	Stripes in the two-dimensional t - J model with infinite projected entangled-pair states. Physical Review B, 2011, 84, .	3.2	160
13	Ground State Fidelity from Tensor Network Representations. Physical Review Letters, 2008, 100, 080601.	7.8	152
14	Operational criterion and constructive checks for the separability of low-rank density matrices. Physical Review A, 2000, 62, .	2.5	124
15	Simulation of interacting fermions with entanglement renormalization. Physical Review A, 2010, 81, .	2.5	108
16	Explicit tensor network representation for the ground states of string-net models. Physical Review B, 2009, 79, .	3.2	100
17	Approximate transformations and robust manipulation of bipartite pure-state entanglement. Physical Review A, 2000, 62, .	2.5	96
18	Entanglement negativity and topological order. Physical Review A, 2013, 88, .	2.5	85

#	ARTICLE	IF	CITATIONS
19	Entanglement monotones. <i>Journal of Modern Optics</i> , 2000, 47, 355-376.	1.3	79
20	Tensor network states and algorithms in the presence of a global SU(2) symmetry. <i>Physical Review B</i> , 2012, 86, .	3.2	72
21	Perfect sampling with unitary tensor networks. <i>Physical Review B</i> , 2012, 85, .	3.2	70
22	Simulation of fermionic lattice models in two dimensions with projected entangled-pair states: Next-nearest neighbor Hamiltonians. <i>Physical Review B</i> , 2010, 82, .	3.2	63
23	Infinite boundary conditions for matrix product state calculations. <i>Physical Review B</i> , 2012, 86, .	3.2	63
24	Entanglement contour. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P10011.	2.3	54
25	Explicit construction of local conserved operators in disordered many-body systems. <i>Physical Review B</i> , 2016, 94, .	3.2	40
26	Simulation of one-dimensional quantum systems with a global SU(2) symmetry. <i>New Journal of Physics</i> , 2010, 12, 033029.	2.9	39
27	Simulation of time evolution with multiscale entanglement renormalization ansatz. <i>Physical Review A</i> , 2008, 77, .	2.5	38
28	Topological conformal defects with tensor networks. <i>Physical Review B</i> , 2016, 94, .	3.2	38
29	Tensor network quotient takes the vacuum to the thermal state. <i>Physical Review B</i> , 2016, 94, .	3.2	35
30	Entanglement growth and simulation efficiency in one-dimensional quantum lattice systems. <i>Physical Review A</i> , 2008, 78, .	2.5	33
31	Conformal Data and Renormalization Group Flow in Critical Quantum Spin Chains Using Periodic Uniform Matrix Product States. <i>Physical Review Letters</i> , 2018, 121, 230402.	7.8	32
32	Fast convergence of imaginary time evolution tensor network algorithms by recycling the environment. <i>Physical Review B</i> , 2015, 91, .	3.2	29
33	Extraction of conformal data in critical quantum spin chains using the Koo-Saleur formula. <i>Physical Review B</i> , 2017, 96, .	3.2	29
34	Optimal estimation of two-qubit pure-state entanglement. <i>Physical Review A</i> , 2000, 61, .	2.5	27
35	Global symmetries in tensor network states: Symmetric tensors versus minimal bond dimension. <i>Physical Review B</i> , 2013, 88, .	3.2	26
36	Continuous Matrix Product States for Quantum Fields: An Energy Minimization Algorithm. <i>Physical Review Letters</i> , 2017, 118, 220402.	7.8	26

#	ARTICLE	IF	CITATIONS
37	Translation invariance, topology, and protection of criticality in chains of interacting anyons. Physical Review B, 2012, 86, .	3.2	25
38	Conformal Fields and Operator Product Expansion in Critical Quantum Spin Chains. Physical Review Letters, 2020, 124, 040604.	7.8	23
39	Collisions of False-Vacuum Bubble Walls in a Quantum Spin Chain. PRX Quantum, 2022, 3, .	9.2	20
40	Lieb-Liniger model with exponentially decaying interactions: A continuous matrix product state study. Physical Review B, 2015, 92, .	3.2	19
41	Optimal local preparation of an arbitrary mixed state of two qubits: Closed expression for the single-copy case. Physical Review A, 2000, 62, .	2.5	18
42	Quantum Criticality with the Multi-scale Entanglement Renormalization Ansatz. Springer Series in Solid-state Sciences, 2013, , 99-130.	0.3	18
43	Variational Monte Carlo with the multiscale entanglement renormalization ansatz. Physical Review B, 2012, 85, .	3.2	15
44	Matrix product states for anyonic systems and efficient simulation of dynamics. Physical Review B, 2014, 89, .	3.2	14
45	Entanglement and correlations in the continuous multi-scale entanglement renormalization ansatz. Journal of High Energy Physics, 2017, 2017, 1.	4.7	13
46	Continuous matrix product states for nonrelativistic quantum fields: A lattice algorithm for inhomogeneous systems. Physical Review B, 2018, 98, .	3.2	12
47	Emergence of conformal symmetry in quantum spin chains: Antiperiodic boundary conditions and supersymmetry. Physical Review B, 2020, 101, .	3.2	12
48	Dynamical windows for real-time evolution with matrix product states. Physical Review B, 2013, 88, .	3.2	10
49	Determining topological order from infinite projected entangled pair states. Physical Review B, 2020, 101, .	3.2	7
50	Multiboundary generalization of thermofield double states and their realization in critical quantum spin chains. Physical Review B, 2022, 105, .	3.2	5
51	Entanglement renormalization for gauge invariant quantum fields. Physical Review D, 2021, 103, .	4.7	4
52	Classical Simulations of Quantum Field Theory in Curved Spacetime I: Fermionic Hawking-Hartle Vacua from a Staggered Lattice Scheme. Quantum - the Open Journal for Quantum Science, 0, 4, 351.	0.0	3
53	Universal edge information from wave-function deformation. Physical Review B, 2017, 95, .	3.2	2