Otfried GÃ¼hne

List of Publications by Year
in descending order

107 papers	8,349 citations	81900 39 h-index	46799 89 g-index
108 all docs	108 docs citations	108 times ranked	3515 citing authors

#	Article	IF	Citations
1	Entanglement detection. Physics Reports, 2009, 474, 1-75.	25.6	1,668
2	Experimental entanglement of six photons in graph states. Nature Physics, 2007, 3, 91-95.	16.7	554
3	Experimental Detection of Multipartite Entanglement using Witness Operators. Physical Review Letters, 2004, 92, 087902.	7.8	371
4	Quantum steering. Reviews of Modern Physics, 2020, 92, .	45.6	315
5	Experimental demonstration of a hyper-entangled ten-qubit SchrÃ¶dinger cat state. Nature Physics, 2010, 6, 331-335.	16.7	282
6	Detecting Genuine Multipartite Entanglement with Two Local Measurements. Physical Review Letters, 2005, 94, 060501.	7.8	262
7	Experimental Analysis of a Four-Qubit Photon Cluster State. Physical Review Letters, 2005, 95, 210502.	7.8	238
8	Characterizing Entanglement via Uncertainty Relations. Physical Review Letters, 2004, 92, 117903.	7.8	237
9	Taming Multiparticle Entanglement. Physical Review Letters, 2011, 106, 190502.	7.8	215
10	Separability criteria for genuine multiparticle entanglement. New Journal of Physics, 2010, 12, 053002.	2.9	212
11	Optimal Spin Squeezing Inequalities Detect Bound Entanglement in Spin Models. Physical Review Letters, 2007, 99, 250405.	7.8	181
12	Entanglement detection in the stabilizer formalism. Physical Review A, 2005, 72, .	2.5	176
13	Joint Measurability of Generalized Measurements Implies Classicality. Physical Review Letters, 2014, 113, 160403.	7.8	172
14	Multipartite entanglement in spin chains. New Journal of Physics, 2005, 7, 229-229.	2.9	155
15	Experimental multiparticle entanglement dynamics induced by decoherence. Nature Physics, 2010, 6, 943-946.	16.7	152
16	Bell Inequalities for Graph States. Physical Review Letters, 2005, 95, 120405.	7.8	147
17	One-to-One Mapping between Steering and Joint Measurability Problems. Physical Review Letters, 2015, 115, 230402.	7.8	131
18	Device-Independent Entanglement Quantification and Related Applications. Physical Review Letters, 2013, 111, 030501.	7.8	127

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19	Entropic uncertainty relations and entanglement. Physical Review A, 2004, 70, .	2.5	120
20	Nonlinear Entanglement Witnesses. Physical Review Letters, 2006, 96, 170502.	7.8	102
21	Quantifying Quantum Resources with Conic Programming. Physical Review Letters, 2019, 122, 130404.	7.8	94
22	Toolbox for entanglement detection and fidelity estimation. Physical Review A, 2007, 76, .	2.5	92
23	Entanglement and Permutational Symmetry. Physical Review Letters, 2009, 102, 170503.	7.8	89
24	Entanglement criteria based on local uncertainty relations are strictly stronger than the computable cross norm criterion. Physical Review A, 2006, 74, .	2.5	83
25	Systematic Errors in Current Quantum State Tomography Tools. Physical Review Letters, 2015, 114, 080403.	7.8	82
26	Compatibility and noncontextuality for sequential measurements. Physical Review A, 2010, 81, .	2.5	81
27	Bounding Temporal Quantum Correlations. Physical Review Letters, 2013, 111, 020403.	7.8	78
28	Permutationally invariant state reconstruction. New Journal of Physics, 2012, 14, 105001.	2.9	73
29	Steering Bound Entangled States: A Counterexample to the Stronger Peres Conjecture. Physical Review Letters, 2014, 113, 050404.	7.8	68
30	Absolutely Maximally Entangled States of Seven Qubits Do Not Exist. Physical Review Letters, 2017, 118, 200502.	7.8	68
31	Memory cost of quantum contextuality. New Journal of Physics, 2011, 13, 113011.	2.9	67
32	Optimal Inequalities for State-Independent Contextuality. Physical Review Letters, 2012, 109, 250402.	7.8	66
33	Scaling of genuine multiparticle entanglement close to a quantum phase transition. Physical Review B, 2014, 89, .	3.2	62
34	Investigating Three Qubit Entanglement with Local Measurements. International Journal of Theoretical Physics, 2003, 42, 1001-1013.	1.2	50
35	Evaluating Convex Roof Entanglement Measures. Physical Review Letters, 2015, 114, 160501.	7.8	50
36	Bounding the quantum dimension with contextuality. Physical Review A, 2014, 89, .	2.5	47

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37	Steering criteria from general entropic uncertainty relations. Physical Review A, 2018, 98, .	2.5	47
38	Entanglement and nonclassical properties of hypergraph states. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 335303.	2.1	45
39	Bounds on absolutely maximally entangled states from shadow inequalities, and the quantum MacWilliams identity. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 175301.	2.1	45
40	Characterizing Multipartite Entanglement with Moments of Random Correlations. Physical Review Letters, 2019, 122, 120505.	7.8	41
41	Characterizing Genuine Multilevel Entanglement. Physical Review Letters, 2018, 120, 060502.	7.8	40
42	Estimating Entanglement Monotones with a Generalization of the Wootters Formula. Physical Review Letters, 2012, 109, 200503.	7.8	39
43	Entanglement criteria for Dicke states. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 385304.	2.1	39
44	Steering Maps and Their Application to Dimension-Bounded Steering. Physical Review Letters, 2016, 116, 090403.	7.8	35
45	Multiparticle covariance matrices and the impossibility of detecting graph-state entanglement with two-particle correlations. Physical Review A, 2010, 82, .	2.5	34
46	Enhanced entanglement criterion via symmetric informationally complete measurements. Physical Review A, 2018, 98, .	2.5	34
47	Quantifying entanglement with covariance matrices. Physical Review A, 2010, 81, .	2.5	33
48	Increasing the Statistical Significance of Entanglement Detection in Experiments. Physical Review Letters, 2010, 104, 210401.	7.8	32
49	Entanglement criteria and full separability of multi-qubit quantum states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 406-410.	2.1	32
50	Analytical characterization of the genuine multiparticle negativity. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 155301.	2.1	31
51	Structure of temporal correlations of a qubit. New Journal of Physics, 2018, 20, 102001.	2.9	31
52	Certifying Systematic Errors in Quantum Experiments. Physical Review Letters, 2013, 110, 180401.	7.8	30
53	Optimal Classical Simulation of State-Independent Quantum Contextuality. Physical Review Letters, 2018, 120, 130401.	7.8	30
54	Optimal verification of general bipartite pure states. Npj Quantum Information, 2019, 5, .	6.7	30

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55	Bound Entanglement from Randomized Measurements. Physical Review Letters, 2021, 126, 150501.	7.8	29
56	Relaxations of separability in multipartite systems: Semidefinite programs, witnesses and volumes. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 505302.	2.1	28
57	Geometry of Einstein-Podolsky-Rosen Correlations. Physical Review Letters, 2019, 122, 240401.	7.8	27
58	Optimal Entanglement Certification from Moments of the Partial Transpose. Physical Review Letters, 2021, 127, 060504.	7.8	27
59	Evaluating the geometric measure of multiparticle entanglement. Annalen Der Physik, 2016, 528, 278-287.	2.4	25
60	Quantum entanglement in the triangle network. Physical Review A, 2021, 103, .	2.5	25
61	Convex Optimization over Classes of Multiparticle Entanglement. Physical Review Letters, 2018, 120, 050506.	7.8	23
62	Experimentally Accessible Lower Bounds for Genuine Multipartite Entanglement and Coherence Measures. Physical Review Applied, 2020, 13, .	3.8	23
63	Contextuality in Phase Space. Physical Review Letters, 2015, 114, 250403.	7.8	22
64	Unified picture for spatial, temporal, and channel steering. Physical Review A, 2018, 97, .	2.5	22
65	Entanglement characterization using quantum designs. Quantum - the Open Journal for Quantum Science, 0, 4, 325.	0.0	22
66	Entropic Steering Criteria: Applications to Bipartite and Tripartite Systems. Entropy, 2018, 20, 763.	2.2	21
67	Quantifying Entanglement of Maximal Dimension in Bipartite Mixed States. Physical Review Letters, 2016, 117, 190502.	7.8	19
68	Multiparticle entanglement as an emergent phenomenon. Physical Review A, 2016, 93, .	2.5	19
69	Characterizing quantum networks: Insights from coherence theory. Physical Review A, 2021, 103, .	2.5	19
70	Algorithm for characterizing stochastic local operations and classical communication classes of multiparticle entanglement. Physical Review A, 2012, 86, .	2.5	18
71	Computing complexity measures for quantum states based on exponential families. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 125301.	2.1	18
72	Detecting coherence via spectrum estimation. Physical Review A, 2019, 99, .	2.5	18

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73	Geometry of Faithful Entanglement. Physical Review Letters, 2021, 126, 140503.	7.8	17
74	Graph states and local unitary transformations beyond local Clifford operations. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 195302.	2.1	15
75	Proof of the Peres Conjecture for Contextuality. Physical Review Letters, 2020, 124, 230401.	7.8	15
76	Genuine temporal correlations can certify the quantum dimension. New Journal of Physics, 2020, 22, 023028.	2.9	15
77	A complete hierarchy for the pure state marginal problem in quantum mechanics. Nature Communications, 2021, 12, 1012.	12.8	15
78	Genuine multipartite entanglement in time. SciPost Physics, 2021, 10, .	4.9	15
79	Symmetries in quantum networks lead to no-go theorems for entanglement distribution and to verification techniques. Nature Communications, 2022, 13, 496.	12.8	15
80	Fifty years of Bellâ€™s theorem. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 420301.	2.1	14
81	Tests against noncontextual models with measurement disturbances. Physical Review A, 2013, 87, .	2.5	13
82	Characterizing Ground and Thermal States of Few-Body Hamiltonians. Physical Review Letters, 2016, 117, 010403.	7.8	13
83	Completing the proof of â€œGeneric quantum nonlocalityâ€. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1281-1285.	2.1	13
84	Almost all four-particle pure states are determined by their two-body marginals. Physical Review A, 2017, 96, .	2.5	13
85	Entanglement properties of quantum grid states. Physical Review A, 2018, 97, .	2.5	13
86	Statistical Methods for Quantum State Verification and Fidelity Estimation. Advanced Quantum Technologies, 2022, 5, .	3.9	13
87	Entropic uncertainty relations from quantum designs. Physical Review Research, 2020, 2, .	3.6	12
88	Characterizing quantum states via sector lengths. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 345302.	2.1	11
89	Statistically significant tests of multiparticle quantum correlations based on randomized measurements. Physical Review A, 2022, 106, .	2.5	11
90	Graphical description of unitary transformations on hypergraph states. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 19LT01.	2.1	10

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91	Some Quantum Measurements with Three Outcomes Can Reveal Nonclassicality where All Two-Outcome Measurements Fail to Do So. Physical Review Letters, 2020, 125, 230402.	7.8	10
92	Simulating extremal temporal correlations. New Journal of Physics, 2020, 22, 103037.	2.9	10
93	Certifying quantum memories with coherence. Physical Review A, 2019, 99, .	2.5	9
94	Entropic uncertainty relations and the stabilizer formalism. Journal of Mathematical Physics, 2012, 53, .	1.1	8
95	Quantum measurement incompatibility in subspaces. Physical Review A, 2021, 103, .	2.5	7
96	Generalizing Optimal Bell Inequalities. Physical Review Letters, 2020, 125, 200401.	7.8	5
97	Exploring the relationship between the faithfulness and entanglement of two qubits. Physical Review A, 2021, 103, .	2.5	5
98	Quantum-Inspired Hierarchy for Rank-Constrained Optimization. PRX Quantum, 2022, 3, .	9.2	5
99	Characterizing the width of entanglement. New Journal of Physics, 2016, 18, 123024.	2.9	4
100	Constraints on correlations in multiqubit systems. Physical Review A, 2018, 97, .	2.5	4
101	Characterizing multipartite entanglement classes via higher-dimensional embeddings. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 335302.	2.1	4
102	Structure of dimension-bounded temporal correlations. Physical Review A, 2022, 105, .	2.5	4
103	The structure of ultrafine entanglement witnesses. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 365307.	2.1	3
104	Quantum steering of Bell-diagonal states with generalized measurements. Physical Review A, 2020, 101, .	2.5	3
105	Low energy properties of evenâ€legged <i>d</i> â€dimensional quantum spin systems: a variational approach. Physica Status Solidi (B): Basic Research, 2008, 245, 1552-1562.	1.5	2
106	Finding optimal Bell inequalities using the cone-projection technique. Physical Review A, 2021, 104, .	2.5	2
107	Combinatorial entanglement: detecting entanglement in quantum states using grid-labelled graphs. Electronic Notes in Discrete Mathematics, 2017, 61, 819-825.	0.4	1