

# Barbara Maria Terhal

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/7285289/barbara-maria-terhal-publications-by-year.pdf>

**Version:** 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

77  
papers

6,459  
citations

40  
h-index

80  
g-index

85  
ext. papers

7,536  
ext. citations

4.7  
avg, IF

6.46  
L-index

#	Paper	IF	Citations
77	Realizing modular quadrature measurements via a tunable photon-pressure coupling in circuit QED. <i>Physical Review A</i> , <b>2020</b> , 101,	2.6	13
76	Hardness and Ease of Curing the Sign Problem for Two-Local Qubit Hamiltonians. <i>SIAM Journal on Computing</i> , <b>2020</b> , 49, 1332-1362	1.1	7
75	Leakage detection for a transmon-based surface code. <i>Npj Quantum Information</i> , <b>2020</b> , 6,	8.6	8
74	Towards scalable bosonic quantum error correction. <i>Quantum Science and Technology</i> , <b>2020</b> , 5, 043001	5.5	36
73	Towards a realistic GaAs-spin qubit device for a classical error-corrected quantum memory. <i>Physical Review A</i> , <b>2020</b> , 102,	2.6	2
72	Spectral quantum tomography. <i>Npj Quantum Information</i> , <b>2019</b> , 5,	8.6	6
71	Fast, High-Fidelity Conditional-Phase Gate Exploiting Leakage Interference in Weakly Anharmonic Superconducting Qubits. <i>Physical Review Letters</i> , <b>2019</b> , 123, 120502	7.4	57
70	Hamiltonian quantum computing with superconducting qubits. <i>Quantum Science and Technology</i> , <b>2019</b> , 4, 035002	5.5	5
69	Quantum error correction with the toric Gottesman-Kitaev-Preskill code. <i>Physical Review A</i> , <b>2019</b> , 99,	2.6	49
68	Code deformation and lattice surgery are gauge fixing. <i>New Journal of Physics</i> , <b>2019</b> , 21, 033028	2.9	12
67	Quantum phase estimation of multiple eigenvalues for small-scale (noisy) experiments. <i>New Journal of Physics</i> , <b>2019</b> , 21, 023022	2.9	44
66	Generating grid states from Schrödinger-cat states without postselection. <i>Physical Review A</i> , <b>2018</b> , 97,	2.6	38
65	Performance and structure of single-mode bosonic codes. <i>Physical Review A</i> , <b>2018</b> , 97,	2.6	100
64	The small stellated dodecahedron code and friends. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2018</b> , 376,	3	9
63	Single-mode displacement sensor. <i>Physical Review A</i> , <b>2017</b> , 95,	2.6	48
62	Roads towards fault-tolerant universal quantum computation. <i>Nature</i> , <b>2017</b> , 549, 172-179	50.4	175
61	Hyperbolic and semi-hyperbolic surface codes for quantum storage. <i>Quantum Science and Technology</i> , <b>2017</b> , 2, 035007	5.5	24

60	Quantum Phase Transitions of the Majorana Toric Code in the Presence of Finite Cooper-Pair Tunneling. <i>Physical Review Letters</i> , <b>2017</b> , 119, 180508	7.4	9
59	Local decoders for the 2D and 4D toric code. <i>Quantum Information and Computation</i> , <b>2017</b> , 17, 181-208	0.9	10
58	Encoding a qubit into a cavity mode in circuit QED using phase estimation. <i>Physical Review A</i> , <b>2016</b> , 93,	2.6	58
57	Constructions and Noise Threshold of Hyperbolic Surface Codes. <i>IEEE Transactions on Information Theory</i> , <b>2016</b> , 62, 3731-3744	2.8	42
56	Adiabatic and Hamiltonian computing on a 2D lattice with simple two-qubit interactions. <i>New Journal of Physics</i> , <b>2016</b> , 18, 023042	2.9	18
55	Noise thresholds for the [4,2,2]-concatenated toric code. <i>Quantum Information and Computation</i> , <b>2016</b> , 16, 1261-1281	0.9	10
54	Universal adiabatic quantum computation via the space-time circuit-to-Hamiltonian construction. <i>Physical Review Letters</i> , <b>2015</b> , 114, 140501	7.4	23
53	Quantum error correction for quantum memories. <i>Reviews of Modern Physics</i> , <b>2015</b> , 87, 307-346	40.5	404
52	Quantum Dense Coding <b>2015</b> , 1-5		
51	Space-time circuit-to-Hamiltonian construction and its applications. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2014</b> , 47, 195304	2	19
50	Dispersive qubit measurement by interferometry with parametric amplifiers. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	37
49	The power of noisy fermionic quantum computation. <i>New Journal of Physics</i> , <b>2013</b> , 15, 013015	2.9	16
48	From Majorana fermions to topological order. <i>Physical Review Letters</i> , <b>2012</b> , 108, 260504	7.4	60
47	The Fragility of Quantum Information?. <i>Lecture Notes in Computer Science</i> , <b>2012</b> , 47-56	0.9	2
46	Topological order in an exactly solvable 3D spin model. <i>Annals of Physics</i> , <b>2011</b> , 326, 839-866	2.5	115
45	Constructions and noise threshold of topological subsystem codes. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2011</b> , 44, 155301	2	21
44	Tradeoffs for reliable quantum information storage in 2D systems. <i>Physical Review Letters</i> , <b>2010</b> , 104, 050503	7.4	74
43	Thermodynamic stability criteria for a quantum memory based on stabilizer and subsystem codes. <i>New Journal of Physics</i> , <b>2010</b> , 12, 025013	2.9	33

42	Majorana fermion codes. <i>New Journal of Physics</i> , <b>2010</b> , 12, 083039	2.9	50
41	Complexity of Stoquastic Frustration-Free Hamiltonians. <i>SIAM Journal on Computing</i> , <b>2010</b> , 39, 1462-1485.1		58
40	Qubit state discrimination. <i>Physical Review A</i> , <b>2010</b> , 81,	2.6	18
39	A no-go theorem for a two-dimensional self-correcting quantum memory based on stabilizer codes. <i>New Journal of Physics</i> , <b>2009</b> , 11, 043029	2.9	128
38	Fault-tolerant computing with biased-noise superconducting qubits: a case study. <i>New Journal of Physics</i> , <b>2009</b> , 11, 013061	2.9	43
37	The Bounded-Storage Model in the Presence of a Quantum Adversary. <i>IEEE Transactions on Information Theory</i> , <b>2008</b> , 54, 749-762	2.8	34
36	Cryptography from noisy storage. <i>Physical Review Letters</i> , <b>2008</b> , 100, 220502	7.4	83
35	Quantum simulation of many-body Hamiltonians using perturbation theory with bounded-strength interactions. <i>Physical Review Letters</i> , <b>2008</b> , 101, 070503	7.4	50
34	Quantum bit commitment with misaligned reference frames. <i>Physical Review A</i> , <b>2006</b> , 73,	2.6	6
33	Fermionic Linear Optics Revisited. <i>Foundations of Physics</i> , <b>2005</b> , 35, 1967-1984	1.2	18
32	Fault-tolerant quantum computation for local non-Markovian noise. <i>Physical Review A</i> , <b>2005</b> , 71,	2.6	97
31	Local fault-tolerant quantum computation. <i>Physical Review A</i> , <b>2005</b> , 72,	2.6	60
30	Locking classical correlations in quantum States. <i>Physical Review Letters</i> , <b>2004</b> , 92, 067902	7.4	163
29	Is entanglement monogamous?. <i>IBM Journal of Research and Development</i> , <b>2004</b> , 48, 71-78	2.5	152
28	Security trade-offs in ancilla-free quantum bit commitment in the presence of superselection rules. <i>New Journal of Physics</i> , <b>2004</b> , 6, 80-80	2.9	4
27	Quantum Entanglement: A Modern Perspective. <i>Physics Today</i> , <b>2003</b> , 56, 46-52	0.9	20
26	Hiding Quantum Data. <i>Foundations of Physics</i> , <b>2003</b> , 33, 1629-1647	1.2	23
25	Unextendible Product Bases, Uncompletable Product Bases and Bound Entanglement. <i>Communications in Mathematical Physics</i> , <b>2003</b> , 238, 379-410	2	204

24	Rank two bipartite bound entangled states do not exist. <i>Theoretical Computer Science</i> , <b>2003</b> , 292, 589-596	1	48
23	Symmetric extensions of quantum States and local hidden variable theories. <i>Physical Review Letters</i> , <b>2003</b> , 90, 157903	7.4	75
22	Quantum data hiding. <i>IEEE Transactions on Information Theory</i> , <b>2002</b> , 48, 580-598	2.8	224
21	Detecting quantum entanglement. <i>Theoretical Computer Science</i> , <b>2002</b> , 287, 313-335	1.1	161
20	Classical simulation of noninteracting-fermion quantum circuits. <i>Physical Review A</i> , <b>2002</b> , 65,	2.6	132
19	The entanglement of purification. <i>Journal of Mathematical Physics</i> , <b>2002</b> , 43, 4286-4298	1.2	155
18	A family of indecomposable positive linear maps based on entangled quantum states. <i>Linear Algebra and Its Applications</i> , <b>2001</b> , 323, 61-73	0.9	117
17	Nonadditivity of bipartite distillable entanglement follows from a conjecture on bound entangled Werner states. <i>Physical Review Letters</i> , <b>2001</b> , 86, 2681-4	7.4	79
16	Remote state preparation. <i>Physical Review Letters</i> , <b>2001</b> , 87, 077902	7.4	578
15	Hiding bits in bell states. <i>Physical Review Letters</i> , <b>2001</b> , 86, 5807-10	7.4	143
14	The asymptotic entanglement cost of preparing a quantum state. <i>Journal of Physics A</i> , <b>2001</b> , 34, 6891-6898		187
13	Bell inequalities and the separability criterion. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2000</b> , 271, 319-326	2.3	482
12	Problem of equilibration and the computation of correlation functions on a quantum computer. <i>Physical Review A</i> , <b>2000</b> , 61,	2.6	91
11	Schmidt number for density matrices. <i>Physical Review A</i> , <b>2000</b> , 61,	2.6	223
10	Evidence for bound entangled states with negative partial transpose. <i>Physical Review A</i> , <b>2000</b> , 61,	2.6	150
9	Optimal decompositions of barely separable states. <i>Journal of Modern Optics</i> , <b>2000</b> , 47, 377-385	1.1	16
8	Entanglement of formation for isotropic states. <i>Physical Review Letters</i> , <b>2000</b> , 85, 2625-8	7.4	185
7	Simulating quantum operations with mixed environments. <i>Physical Review A</i> , <b>1999</b> , 60, 881-885	2.6	25

6	Unextendible Product Bases and Bound Entanglement. <i>Physical Review Letters</i> , <b>1999</b> , 82, 5385-5388	7.4	475
5	Quantum capacity is properly defined without encodings. <i>Physical Review A</i> , <b>1998</b> , 58, 3496-3501	2.6	22
4	Single quantum querying of a database. <i>Physical Review A</i> , <b>1998</b> , 58, 1822-1826	2.6	33
3	Decoherence: the obstacle to quantum computation. <i>Physics World</i> , <b>1998</b> , 11, 53-58	0.5	22
2	Two-local qubit Hamiltonians: when are they stoquastic?. <i>Quantum - the Open Journal for Quantum Science</i> , 3, 139		15
1	Optimal decompositions of barely separable states		1