

Marco Tomamichel

List of Publications by Year in descending order

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102
papers

5,706
citations

126907

33
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91884

69
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103
all docs

103
docs citations

103
times ranked

2640
citing authors

#	ARTICLE	IF	CITATIONS
1	Encoding Classical Information Into Quantum Resources. IEEE Transactions on Information Theory, 2022, 68, 4518-4530.	2.4	8
2	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. Communications in Mathematical Physics, 2022, 392, 993-1027.	2.2	5
3	Work fluctuations due to partial thermalizations in two-level systems. Physical Review E, 2021, 103, 042141.	2.1	2
4	Entropy and Relative Entropy From Information-Theoretic Principles. IEEE Transactions on Information Theory, 2021, 67, 6313-6327.	2.4	11
5	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. , 2021, , .		3
6	Moderate Deviation Analysis for Quantum State Transfer. , 2021, , .		0
7	Jointly Constrained Semidefinite Bilinear Programming With an Application to Dobrushin Curves. IEEE Transactions on Information Theory, 2020, 66, 2934-2950.	2.4	3
8	Quantum Channel Simulation and the Channel's Smooth Max-Information. IEEE Transactions on Information Theory, 2020, 66, 2129-2140.	2.4	26
9	Decomposition rules for quantum Rényi mutual information with an application to information exclusion relations. Journal of Mathematical Physics, 2020, 61, .	1.1	4
10	Optimal extensions of resource measures and their applications. Physical Review A, 2020, 102, .	2.5	9
11	Quantum advantage with noisy shallow circuits. Nature Physics, 2020, 16, 1040-1045.	16.7	66
12	Modeling and control of a reconfigurable photonic circuit using deep learning. Quantum Science and Technology, 2020, 5, 025001.	5.8	15
13	Partially Smoothed Information Measures. IEEE Transactions on Information Theory, 2020, 66, 5022-5036.	2.4	17
14	Advances in quantum cryptography. Advances in Optics and Photonics, 2020, 12, 1012.	25.5	848
15	Efficient online quantum state estimation using a matrix-exponentiated gradient method. New Journal of Physics, 2019, 21, 033006.	2.9	12
16	Non-Asymptotic Entanglement Distillation. IEEE Transactions on Information Theory, 2019, 65, 6454-6465.	2.4	28
17	On Converse Bounds for Classical Communication Over Quantum Channels. IEEE Transactions on Information Theory, 2019, 65, 4609-4619.	2.4	21
18	Avoiding Irreversibility: Engineering Resonant Conversions of Quantum Resources. Physical Review Letters, 2019, 122, 110403.	7.8	20

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19	Moderate deviation analysis of majorization-based resource interconversion. <i>Physical Review A</i> , 2019, 99, .	2.5	10
20	Quantum Markov Order. <i>Physical Review Letters</i> , 2019, 122, 140401.	7.8	44
21	Second-Order Characterizations via Partial Smoothing. , 2019, , .		0
22	Quantum Advantage with Noisy Shallow Circuits in 3D. , 2019, , .		1
23	Moderate deviation analysis of majorisation-based resource interconversion. , 2019, , .		0
24	A minimax approach to one-shot entropy inequalities. <i>Journal of Mathematical Physics</i> , 2019, 60, 122201.	1.1	9
25	Quantum Sphere-Packing Bounds With Polynomial Prefactors. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 2872-2898.	2.4	21
26	Operational Interpretation of Rényi Information Measures via Composite Hypothesis Testing Against Product and Markov Distributions. <i>IEEE Transactions on Information Theory</i> , 2018, 64, 1064-1082.	2.4	29
27	Beating the classical limits of information transmission using a quantum decoder. <i>Physical Review A</i> , 2018, 97, .	2.5	0
28	Capacity estimation and verification of quantum channels with arbitrarily correlated errors. <i>Nature Communications</i> , 2018, 9, 27.	12.8	20
29	Quantum Channel Simulation and the Channel's Smooth Max-Information. , 2018, , .		3
30	Rényi Divergences as Weighted Non-commutative Vector-Valued L_p -Spaces. <i>Annales Henri Poincaré</i> , 2018, 19, 1843-1867.	1.7	26
31	On Finite Blocklength Converse Bounds for Classical Communication Over Quantum Channels. , 2018, , .		0
32	Converse Bounds for Private Communication Over Quantum Channels. <i>IEEE Transactions on Information Theory</i> , 2017, 63, 1792-1817.	2.4	98
33	Entropic uncertainty relations and their applications. <i>Reviews of Modern Physics</i> , 2017, 89, .	45.6	378
34	Multivariate Trace Inequalities. <i>Communications in Mathematical Physics</i> , 2017, 352, 37-58.	2.2	65
35	Generalized Log-Majorization and Multivariate Trace Inequalities. <i>Annales Henri Poincaré</i> , 2017, 18, 2499-2521.	1.7	7
36	Strong Converse Rates for Quantum Communication. <i>IEEE Transactions on Information Theory</i> , 2017, 63, 715-727.	2.4	54

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37	Fundamental finite key limits for one-way information reconciliation in quantum key distribution. Quantum Information Processing, 2017, 16, 1.	2.2	17
38	Gaussian Hypothesis Testing and Quantum Illumination. Physical Review Letters, 2017, 119, 120501.	7.8	57
39	On variational expressions for quantum relative entropies. Letters in Mathematical Physics, 2017, 107, 2239-2265.	1.1	39
40	Moderate Deviation Analysis for Classical Communication over Quantum Channels. Communications in Mathematical Physics, 2017, 355, 1283-1315.	2.2	29
41	Sphere-packing bound for classical-quantum channels. , 2017, , .		0
42	Sphere-packing bound for symmetric classical-quantum channels. , 2017, , .		4
43	A meta-converse for private communication over quantum channels. , 2017, , .		2
44	Moderate deviation analysis for classical communication over quantum channels. , 2017, , .		4
45	Quantum Markov chains and logarithmic trace inequalities. , 2017, , .		3
46	Exponential decay of matrix \hat{H}_t -entropies on Markov semigroups with applications to dynamical evolutions of quantum ensembles. Journal of Mathematical Physics, 2017, 58, .	1.1	8
47	Correlation detection and an operational interpretation of the Rényi mutual information. Journal of Mathematical Physics, 2016, 57, .	1.1	41
48	Exploiting variational formulas for quantum relative entropy. , 2016, , .		3
49	Strengthened monotonicity of relative entropy via pinched Petz recovery map. , 2016, , .		2
50	The Fidelity of Recovery Is Multiplicative. IEEE Transactions on Information Theory, 2016, 62, 1758-1763.	2.4	30
51	On the second-order asymptotics for entanglement-assisted communication. Quantum Information Processing, 2016, 15, 2569-2591.	2.2	33
52	Strengthened Monotonicity of Relative Entropy via Pinched Petz Recovery Map. IEEE Transactions on Information Theory, 2016, 62, 2907-2913.	2.4	45
53	Quantum coding with finite resources. Nature Communications, 2016, 7, 11419.	12.8	50
54	A universal test for gravitational decoherence. Nature Communications, 2016, 7, 13022.	12.8	29

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55	Operational interpretation of Rényi conditional mutual information via composite hypothesis testing against Markov distributions. , 2016, , .		2
56	Quantum Information Processing with Finite Resources. SpringerBriefs in Mathematical Physics, 2016, , .	0.2	146
57	Second-order coding rates for entanglement-assisted communication. , 2015, , .		1
58	Correlation detection and an operational interpretation of the Rényi mutual information. , 2015, , .		7
59	Practical Relativistic Bit Commitment. Physical Review Letters, 2015, 115, 030502.	7.8	35
60	Second-Order Asymptotics for the Classical Capacity of Image-Additive Quantum Channels. Communications in Mathematical Physics, 2015, 338, 103-137.	2.2	48
61	Strong converse rates for quantum communication. , 2015, , .		7
62	Investigating properties of a family of quantum Rényi divergences. Quantum Information Processing, 2015, 14, 1501-1512.	2.2	14
63	The Third-Order Term in the Normal Approximation for the AWGN Channel. IEEE Transactions on Information Theory, 2015, 61, 2430-2438.	2.4	89
64	Fundamental finite key limits for information reconciliation in quantum key distribution. , 2014, , .		7
65	Position-momentum uncertainty relations in the presence of quantum memory. Journal of Mathematical Physics, 2014, 55, .	1.1	46
66	Relating different quantum generalizations of the conditional Rényi entropy. Journal of Mathematical Physics, 2014, 55, .	1.1	58
67	The third-order term in the normal approximation for the AWGN channel. , 2014, , .		4
68	A Decoupling Approach to Classical Data Transmission Over Quantum Channels. IEEE Transactions on Information Theory, 2014, 60, 1562-1572.	2.4	12
69	Second order refinements for the classical capacity of quantum channels with separable input states. , 2014, , .		0
70	A duality relation connecting different quantum generalizations of the conditional Rényi entropy. , 2014, , .		2
71	Entropic uncertainty from effective anticommutators. Physical Review A, 2014, 90, .	2.5	45
72	Second-Order Coding Rates for Channels With State. IEEE Transactions on Information Theory, 2014, 60, 4427-4448.	2.4	38

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73	Device-Independent Quantum Key Distribution with Local Bell Test. <i>Physical Review X</i> , 2013, 3, .	8.9	52
74	Experimental Bit Commitment Based on Quantum Communication and Special Relativity. <i>Physical Review Letters</i> , 2013, 111, 180504.	7.8	73
75	A monogamy-of-entanglement game with applications to device-independent quantum cryptography. <i>New Journal of Physics</i> , 2013, 15, 103002.	2.9	71
76	The link between entropic uncertainty and nonlocality. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 055301.	2.1	37
77	ε-Capacity and strong converse for channels with general state. , 2013, , .		1
78	A Hierarchy of Information Quantities for Finite Block Length Analysis of Quantum Tasks. <i>IEEE Transactions on Information Theory</i> , 2013, 59, 7693-7710.	2.4	180
79	Secure Bit Commitment From Relativistic Constraints. <i>IEEE Transactions on Information Theory</i> , 2013, 59, 4687-4699.	2.4	32
80	A Tight Upper Bound for the Third-Order Asymptotics for Most Discrete Memoryless Channels. <i>IEEE Transactions on Information Theory</i> , 2013, 59, 7041-7051.	2.4	61
81	Decoupling with unitary approximate two-designs. <i>New Journal of Physics</i> , 2013, 15, 053022.	2.9	34
82	On quantum Rényi entropies: A new generalization and some properties. <i>Journal of Mathematical Physics</i> , 2013, 54, .	1.1	431
83	Chain Rules for Smooth Min- and Max-Entropies. <i>IEEE Transactions on Information Theory</i> , 2013, 59, 2603-2612.	2.4	65
84	A tight upper bound for the third-order asymptotics of discrete memoryless channels. , 2013, , .		6
85	One-Sided Device-Independent QKD and Position-Based Cryptography from Monogamy Games. <i>Lecture Notes in Computer Science</i> , 2013, , 609-625.	1.3	11
86	Tight finite-key analysis for quantum cryptography. <i>Nature Communications</i> , 2012, 3, 634.	12.8	428
87	Continuous Variable Quantum Key Distribution: Finite-Key Analysis of Composable Security against Coherent Attacks. <i>Physical Review Letters</i> , 2012, 109, 100502.	7.8	237
88	Uncertainty Relation for Smooth Entropies. <i>Physical Review Letters</i> , 2011, 106, 110506.	7.8	332
89	Leftover Hashing Against Quantum Side Information. <i>IEEE Transactions on Information Theory</i> , 2011, 57, 5524-5535.	2.4	213
90	Impossibility of Growing Quantum Bit Commitments. <i>Physical Review Letters</i> , 2011, 107, 090502.	7.8	12

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91	Duality Between Smooth Min- and Max-Entropies. IEEE Transactions on Information Theory, 2010, 56, 4674-4681.	2.4	159
92	Leftover Hashing against quantum side information. , 2010, , .		11
93	A Fully Quantum Asymptotic Equipartition Property. IEEE Transactions on Information Theory, 2009, 55, 5840-5847.	2.4	223
94	Analysis of Gain and Luminescence in Violet and Blue GaInNâ€“GaN Quantum Wells. IEEE Journal of Quantum Electronics, 2008, 44, 144-149.	1.9	6
95	Optical gain in 407nm and 470nm InGaN/GaN heterostructures: signature of quantum-dot states. Proceedings of SPIE, 2007, , .	0.8	0
96	A Novel Avalanche Free Single Photon Detector. , 0, , .		0
97	A largely self-contained and complete security proof for quantum key distribution. Quantum - the Open Journal for Quantum Science, 0, 1, 14.	0.0	71
98	Beyond the thermodynamic limit: finite-size corrections to state interconversion rates. Quantum - the Open Journal for Quantum Science, 0, 2, 108.	0.0	27
99	Minimax quantum state estimation under Bregman divergence. Quantum - the Open Journal for Quantum Science, 0, 3, 126.	0.0	3
100	An information-theoretic treatment of quantum dichotomies. Quantum - the Open Journal for Quantum Science, 0, 3, 209.	0.0	22
101	Quantum Attacks on Bitcoin, and How to Protect Against Them. Ledger, 0, 3, .	0.0	75
102	Multi-armed quantum bandits: Exploration versus exploitation when learning properties of quantum states. Quantum - the Open Journal for Quantum Science, 0, 6, 749.	0.0	2