

Marco Tomamichel

List of Publications by Year in descending order

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102
papers

5,706
citations

126907

33
h-index

91884

69
g-index

103
all docs

103
docs citations

103
times ranked

2640
citing authors

#	ARTICLE	IF	CITATIONS
1	Advances in quantum cryptography. <i>Advances in Optics and Photonics</i> , 2020, 12, 1012.	25.5	848
2	On quantum Rényi entropies: A new generalization and some properties. <i>Journal of Mathematical Physics</i> , 2013, 54, .	1.1	431
3	Tight finite-key analysis for quantum cryptography. <i>Nature Communications</i> , 2012, 3, 634.	12.8	428
4	Entropic uncertainty relations and their applications. <i>Reviews of Modern Physics</i> , 2017, 89, .	45.6	378
5	Uncertainty Relation for Smooth Entropies. <i>Physical Review Letters</i> , 2011, 106, 110506.	7.8	332
6	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
7	A Fully Quantum Asymptotic Equipartition Property. <i>IEEE Transactions on Information Theory</i> , 2009, 55, 5840-5847.	2.4	223
8	Leftover Hashing Against Quantum Side Information. <i>IEEE Transactions on Information Theory</i> , 2011, 57, 5524-5535.	2.4	213
9	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
10	Duality Between Smooth Min- and Max-Entropies. <i>IEEE Transactions on Information Theory</i> , 2010, 56, 4674-4681.	2.4	159
11	Quantum Information Processing with Finite Resources. <i>SpringerBriefs in Mathematical Physics</i> , 2016, .	0.2	146
12	Converse Bounds for Private Communication Over Quantum Channels. <i>IEEE Transactions on Information Theory</i> , 2017, 63, 1792-1817.	2.4	98
13	The Third-Order Term in the Normal Approximation for the AWGN Channel. <i>IEEE Transactions on Information Theory</i> , 2015, 61, 2430-2438.	2.4	89
14	Quantum Attacks on Bitcoin, and How to Protect Against Them. <i>Ledger</i> , 0, 3, .	0.0	75
15	Experimental Bit Commitment Based on Quantum Communication and Special Relativity. <i>Physical Review Letters</i> , 2013, 111, 180504.	7.8	73
16	A monogamy-of-entanglement game with applications to device-independent quantum cryptography. <i>New Journal of Physics</i> , 2013, 15, 103002.	2.9	71
17	A largely self-contained and complete security proof for quantum key distribution. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 1, 14.	0.0	71
18	Quantum advantage with noisy shallow circuits. <i>Nature Physics</i> , 2020, 16, 1040-1045.	16.7	66

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19	Chain Rules for Smooth Min- and Max-Entropies. IEEE Transactions on Information Theory, 2013, 59, 2603-2612.	2.4	65
20	Multivariate Trace Inequalities. Communications in Mathematical Physics, 2017, 352, 37-58.	2.2	65
21	A Tight Upper Bound for the Third-Order Asymptotics for Most Discrete Memoryless Channels. IEEE Transactions on Information Theory, 2013, 59, 7041-7051.	2.4	61
22	Relating different quantum generalizations of the conditional Rényi entropy. Journal of Mathematical Physics, 2014, 55, .	1.1	58
23	Gaussian Hypothesis Testing and Quantum Illumination. Physical Review Letters, 2017, 119, 120501.	7.8	57
24	Strong Converse Rates for Quantum Communication. IEEE Transactions on Information Theory, 2017, 63, 715-727.	2.4	54
25	Device-Independent Quantum Key Distribution with Local Bell Test. Physical Review X, 2013, 3, .	8.9	52
26	Quantum coding with finite resources. Nature Communications, 2016, 7, 11419.	12.8	50
27	Second-Order Asymptotics for the Classical Capacity of Image-Additive Quantum Channels. Communications in Mathematical Physics, 2015, 338, 103-137.	2.2	48
28	Position-momentum uncertainty relations in the presence of quantum memory. Journal of Mathematical Physics, 2014, 55, .	1.1	46
29	Entropic uncertainty from effective anticommutators. Physical Review A, 2014, 90, .	2.5	45
30	Strengthened Monotonicity of Relative Entropy via Pinched Petz Recovery Map. IEEE Transactions on Information Theory, 2016, 62, 2907-2913.	2.4	45
31	Quantum Markov Order. Physical Review Letters, 2019, 122, 140401.	7.8	44
32	Correlation detection and an operational interpretation of the Rényi mutual information. Journal of Mathematical Physics, 2016, 57, .	1.1	41
33	On variational expressions for quantum relative entropies. Letters in Mathematical Physics, 2017, 107, 2239-2265.	1.1	39
34	Second-Order Coding Rates for Channels With State. IEEE Transactions on Information Theory, 2014, 60, 4427-4448.	2.4	38
35	The link between entropic uncertainty and nonlocality. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 055301.	2.1	37
36	Practical Relativistic Bit Commitment. Physical Review Letters, 2015, 115, 030502.	7.8	35

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37	Decoupling with unitary approximate two-designs. <i>New Journal of Physics</i> , 2013, 15, 053022.	2.9	34
38	On the second-order asymptotics for entanglement-assisted communication. <i>Quantum Information Processing</i> , 2016, 15, 2569-2591.	2.2	33
39	Secure Bit Commitment From Relativistic Constraints. <i>IEEE Transactions on Information Theory</i> , 2013, 59, 4687-4699.	2.4	32
40	The Fidelity of Recovery Is Multiplicative. <i>IEEE Transactions on Information Theory</i> , 2016, 62, 1758-1763.	2.4	30
41	A universal test for gravitational decoherence. <i>Nature Communications</i> , 2016, 7, 13022.	12.8	29
42	Moderate Deviation Analysis for Classical Communication over Quantum Channels. <i>Communications in Mathematical Physics</i> , 2017, 355, 1283-1315.	2.2	29
43	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
44	Non-Asymptotic Entanglement Distillation. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 6454-6465.	2.4	28
45	Beyond the thermodynamic limit: finite-size corrections to state interconversion rates. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 2, 108.	0.0	27
46	Rényi Divergences as Weighted Non-commutative Vector-Valued L_p -Spaces. <i>Annales Henri Poincaré</i> , 2018, 19, 1843-1867.	1.7	26
47	Quantum Channel Simulation and the Channel's Smooth Max-Information. <i>IEEE Transactions on Information Theory</i> , 2020, 66, 2129-2140.	2.4	26
48	An information-theoretic treatment of quantum dichotomies. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 3, 209.	0.0	22
49	On Converse Bounds for Classical Communication Over Quantum Channels. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 4609-4619.	2.4	21
50	Quantum Sphere-Packing Bounds With Polynomial Prefactors. <i>IEEE Transactions on Information Theory</i> , 2019, 65, 2872-2898.	2.4	21
51	Capacity estimation and verification of quantum channels with arbitrarily correlated errors. <i>Nature Communications</i> , 2018, 9, 27.	12.8	20
52	Avoiding Irreversibility: Engineering Resonant Conversions of Quantum Resources. <i>Physical Review Letters</i> , 2019, 122, 110403.	7.8	20
53	Fundamental finite key limits for one-way information reconciliation in quantum key distribution. <i>Quantum Information Processing</i> , 2017, 16, 1.	2.2	17
54	Partially Smoothed Information Measures. <i>IEEE Transactions on Information Theory</i> , 2020, 66, 5022-5036.	2.4	17

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55	Modeling and control of a reconfigurable photonic circuit using deep learning. Quantum Science and Technology, 2020, 5, 025001.	5.8	15
56	Investigating properties of a family of quantum Rényi divergences. Quantum Information Processing, 2015, 14, 1501-1512.	2.2	14
57	Impossibility of Growing Quantum Bit Commitments. Physical Review Letters, 2011, 107, 090502.	7.8	12
58	A Decoupling Approach to Classical Data Transmission Over Quantum Channels. IEEE Transactions on Information Theory, 2014, 60, 1562-1572.	2.4	12
59	Efficient online quantum state estimation using a matrix-exponentiated gradient method. New Journal of Physics, 2019, 21, 033006.	2.9	12
60	Leftover Hashing against quantum side information. , 2010, , .		11
61	Entropy and Relative Entropy From Information-Theoretic Principles. IEEE Transactions on Information Theory, 2021, 67, 6313-6327.	2.4	11
62	One-Sided Device-Independent QKD and Position-Based Cryptography from Monogamy Games. Lecture Notes in Computer Science, 2013, , 609-625.	1.3	11
63	Moderate deviation analysis of majorization-based resource interconversion. Physical Review A, 2019, 99, .	2.5	10
64	A minimax approach to one-shot entropy inequalities. Journal of Mathematical Physics, 2019, 60, 122201.	1.1	9
65	Optimal extensions of resource measures and their applications. Physical Review A, 2020, 102, .	2.5	9
66	Exponential decay of matrix $\hat{\rho}$ -entropies on Markov semigroups with applications to dynamical evolutions of quantum ensembles. Journal of Mathematical Physics, 2017, 58, .	1.1	8
67	Encoding Classical Information Into Quantum Resources. IEEE Transactions on Information Theory, 2022, 68, 4518-4530.	2.4	8
68	Fundamental finite key limits for information reconciliation in quantum key distribution. , 2014, , .		7
69	Correlation detection and an operational interpretation of the Rényi mutual information. , 2015, , .		7
70	Strong converse rates for quantum communication. , 2015, , .		7
71	Generalized Log-Majorization and Multivariate Trace Inequalities. Annales Henri Poincare, 2017, 18, 2499-2521.	1.7	7
72	Analysis of Gain and Luminescence in Violet and Blue GaInN/GaN Quantum Wells. IEEE Journal of Quantum Electronics, 2008, 44, 144-149.	1.9	6

#	ARTICLE	IF	CITATIONS
73	A tight upper bound for the third-order asymptotics of discrete memoryless channels. , 2013, , .		6
74	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. Communications in Mathematical Physics, 2022, 392, 993-1027.	2.2	5
75	The third-order term in the normal approximation for the AWGN channel. , 2014, , .		4
76	Sphere-packing bound for symmetric classical-quantum channels. , 2017, , .		4
77	Moderate deviation analysis for classical communication over quantum channels. , 2017, , .		4
78	Decomposition rules for quantum Rényi mutual information with an application to information exclusion relations. Journal of Mathematical Physics, 2020, 61, .	1.1	4
79	Exploiting variational formulas for quantum relative entropy. , 2016, , .		3
80	Quantum Markov chains and logarithmic trace inequalities. , 2017, , .		3
81	Quantum Channel Simulation and the Channel's Smooth Max-Information. , 2018, , .		3
82	Jointly Constrained Semidefinite Bilinear Programming With an Application to Dobrushin Curves. IEEE Transactions on Information Theory, 2020, 66, 2934-2950.	2.4	3
83	Minimax quantum state estimation under Bregman divergence. Quantum - the Open Journal for Quantum Science, 0, 3, 126.	0.0	3
84	Optimal Adaptive Strategies for Sequential Quantum Hypothesis Testing. , 2021, , .		3
85	A duality relation connecting different quantum generalizations of the conditional Rényi entropy. , 2014, , .		2
86	Strengthened monotonicity of relative entropy via pinched Petz recovery map. , 2016, , .		2
87	Operational interpretation of Rényi conditional mutual information via composite hypothesis testing against Markov distributions. , 2016, , .		2
88	A meta-converse for private communication over quantum channels. , 2017, , .		2
89	Work fluctuations due to partial thermalizations in two-level systems. Physical Review E, 2021, 103, 042141.	2.1	2
90	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

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91	ε-Capacity and strong converse for channels with general state. , 2013, , .		1
92	Second-order coding rates for entanglement-assisted communication. , 2015, , .		1
93	Quantum Advantage with Noisy Shallow Circuits in 3D. , 2019, , .		1
94	A Novel Avalanche Free Single Photon Detector. , 0, , .		0
95	Optical gain in 407nm and 470nm InGaN/GaN heterostructures: signature of quantum-dot states. Proceedings of SPIE, 2007, , .	0.8	0
96	Second order refinements for the classical capacity of quantum channels with separable input states. , 2014, , .		0
97	Sphere-packing bound for classical-quantum channels. , 2017, , .		0
98	Beating the classical limits of information transmission using a quantum decoder. Physical Review A, 2018, 97, .	2.5	0
99	On Finite Blocklength Converse Bounds for Classical Communication Over Quantum Channels. , 2018, , .		0
100	Second-Order Characterizations via Partial Smoothing. , 2019, , .		0
101	Moderate deviation analysis of majorisation-based resource interconversion. , 2019, , .		0
102	Moderate Deviation Analysis for Quantum State Transfer. , 2021, , .		0