

Simone Severini

List of Publications by Year in descending order

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68
papers

2,475
citations

218677

26
h-index

214800

47
g-index

70
all docs

70
docs citations

70
times ranked

2310
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum machine learning: a classical perspective. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170551.	2.1	244
2	Graph-Theoretic Approach to Quantum Correlations. Physical Review Letters, 2014, 112, 040401.	7.8	213
3	Hierarchical quantum classifiers. Npj Quantum Information, 2018, 4, .	6.7	184
4	The Laplacian of a Graph as a Density Matrix: A Basic Combinatorial Approach to Separability of Mixed States. Annals of Combinatorics, 2006, 10, 291-317.	0.6	118
5	Shannon and von Neumann entropy of random networks with heterogeneous expected degree. Physical Review E, 2011, 83, 036109.	2.1	112
6	Zero-Error Communication via Quantum Channels, Noncommutative Graphs, and a Quantum Lovász Number. IEEE Transactions on Information Theory, 2013, 59, 1164-1174.	2.4	111
7	The effects of mutational processes and selection on driver mutations across cancer types. Nature Communications, 2018, 9, 1857.	12.8	91
8	PAX7 target genes are globally repressed in facioscapulohumeral muscular dystrophy skeletal muscle. Nature Communications, 2017, 8, 2152.	12.8	78
9	Number-Theoretic Nature of Communication in Quantum Spin Systems. Physical Review Letters, 2012, 109, 050502.	7.8	73
10	PARAMETERS OF INTEGRAL CIRCULANT GRAPHS AND PERIODIC QUANTUM DYNAMICS. International Journal of Quantum Information, 2007, 05, 417-430.	1.1	69
11	Quantifying Complexity in Networks. International Journal of Agent Technologies and Systems, 2009, 1, 58-67.	0.1	65
12	Intra-Tumour Signalling Entropy Determines Clinical Outcome in Breast and Lung Cancer. PLoS Computational Biology, 2015, 11, e1004115.	3.2	62
13	Increased signaling entropy in cancer requires the scale-free property of protein interaction networks. Scientific Reports, 2015, 5, 9646.	3.3	59
14	Quantum networks on cubelike graphs. Physical Review A, 2008, 78, .	2.5	57
15	Dynamic transcriptomic analysis reveals suppression of PGC1 β /ERR β drives perturbed myogenesis in facioscapulohumeral muscular dystrophy. Human Molecular Genetics, 2019, 28, 1244-1259.	2.9	52
16	Learning hard quantum distributions with variational autoencoders. Npj Quantum Information, 2018, 4, .	6.7	49
17	Quantum Bose-Hubbard model with an evolving graph as a toy model for emergent spacetime. Physical Review D, 2010, 81, .	4.7	47
18	Experimental learning of quantum states. Science Advances, 2019, 5, eaau1946.	10.3	46

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19	Improved lower bounds on genuine-multipartite-entanglement concurrence. <i>Physical Review A</i> , 2012, 85, .	2.5	44
20	Zero Forcing, Linear and Quantum Controllability for Systems Evolving on Networks. <i>IEEE Transactions on Automatic Control</i> , 2013, 58, 2349-2354.	5.7	41
21	Nondiscriminatory propagation on trees. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 482002.	2.1	38
22	QUANTUM STATE TRANSFER THROUGH A QUBIT NETWORK WITH ENERGY SHIFTS AND FLUCTUATIONS. <i>International Journal of Quantum Information</i> , 2009, 07, 1417-1427.	1.1	37
23	Some families of density matrices for which separability is easily tested. <i>Physical Review A</i> , 2006, 73, .	2.5	36
24	The von Neumann Entropy of Networks. <i>SSRN Electronic Journal</i> , 0, , .	0.4	36
25	Control by quantum dynamics on graphs. <i>Physical Review A</i> , 2010, 81, .	2.5	36
26	Pretty good state transfer in qubit chainsâ€”The Heisenberg Hamiltonian. <i>Journal of Mathematical Physics</i> , 2017, 58, .	1.1	35
27	Entangling power of permutations. <i>Physical Review A</i> , 2005, 72, .	2.5	30
28	Logic circuits from zero forcing. <i>Natural Computing</i> , 2015, 14, 485-490.	3.0	27
29	Entanglement and discord assisted entropic uncertainty relations under decoherence. <i>Science China: Physics, Mechanics and Astronomy</i> , 2014, 57, 1703-1711.	5.1	25
30	Extrema of discrete Wigner functions and applications. <i>Physical Review A</i> , 2008, 78, .	2.5	24
31	Matrix permanent and quantum entanglement of permutation invariant states. <i>Journal of Mathematical Physics</i> , 2010, 51, 092203.	1.1	24
32	Hearing the Shape of the Ising Model with a Programmable Superconducting-Flux Annealer. <i>Scientific Reports</i> , 2014, 4, 5703.	3.3	22
33	Quantum state discrimination using noisy quantum neural networks. <i>Physical Review Research</i> , 2021, 3, .	3.6	19
34	New Separations in Zero-Error Channel Capacity Through Projective Kochenâ€”Specker Sets and Quantum Coloring. <i>IEEE Transactions on Information Theory</i> , 2013, 59, 4025-4032.	2.4	18
35	A note on the von Neumann entropy of random graphs. <i>Linear Algebra and Its Applications</i> , 2010, 433, 1722-1725.	0.9	17
36	Bounds on Entanglement-Assisted Source-Channel Coding via the LovÃ¡sz (vartheta) Number and Its Variants. <i>IEEE Transactions on Information Theory</i> , 2014, 60, 7330-7344.	2.4	17

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37	A generalization of boson normal ordering. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 364, 214-220.	2.1	16
38	Combinatorial laplacians and positivity under partial transpose. Mathematical Structures in Computer Science, 2008, 18, 205-219.	0.6	15
39	Kochenâ€™Specker Sets and the Rank-1 Quantum Chromatic Number. IEEE Transactions on Information Theory, 2012, 58, 2524-2529.	2.4	15
40	Wick's theorem for q -deformed boson operators. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 8393-8401.	2.1	13
41	Randomized graph states and their entanglement properties. Physical Review A, 2014, 89, .	2.5	13
42	Entanglement properties of quantum grid states. Physical Review A, 2018, 97, .	2.5	13
43	Approximate entropy of network parameters. Physical Review E, 2012, 85, 046111.	2.1	12
44	The Quantum Separability Problem for Gaussian States. Electronic Notes in Theoretical Computer Science, 2007, 169, 121-131.	0.9	11
45	Note on von Neumann and Rényi entropies of a graph. Linear Algebra and Its Applications, 2017, 521, 240-253.	0.9	11
46	Quantum walk search on Kronecker graphs. Physical Review A, 2018, 98, .	2.5	11
47	Sabidussi versus Hedetniemi for three variations of the chromatic number. Combinatorica, 2016, 36, 395-415.	1.2	10
48	Image classification with quantum pre-training and auto-encoders. International Journal of Quantum Information, 2018, 16, 1840009.	1.1	9
49	Unitary equivalence between the Green's function and Schrödinger approaches for quantum graphs. Physical Review A, 2018, 98, .	2.5	9
50	Weight of quadratic forms and graph states. Physical Review A, 2009, 80, .	2.5	7
51	Entanglement manipulation via dynamics in multiple quantum spin systems. Quantum Information Processing, 2011, 10, 107-121.	2.2	6
52	$\hat{\mathbb{Z}}$ -Kuramoto partitions from the frustrated Kuramoto model generalise equitable partitions. Applicable Analysis and Discrete Mathematics, 2015, 9, 29-38.	0.7	6
53	Approximating Hamiltonian dynamics with the Nyström method. Quantum - the Open Journal for Quantum Science, 0, 4, 234.	0.0	6
54	The disentangling power of unitaries. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 365, 400-402.	2.1	5

#	ARTICLE	IF	CITATIONS
55	Edge Centrality via the Holevo Quantity. Lecture Notes in Computer Science, 2016, , 143-152.	1.3	5
56	Noncrossing Normal Ordering for Functions of Boson Operators. International Journal of Theoretical Physics, 2008, 47, 832-849.	1.2	4
57	Quantifying Disorder in Networks. , 2011, , 66-76.		4
58	Zero-error communication via quantum channels and a quantum Lovász function. , 2011, , .		3
59	Block weighing matrices. Cryptography and Communications, 2013, 5, 201-207.	1.4	3
60	Exclusivity structures and graph representatives of local complementation orbits. Journal of Mathematical Physics, 2013, 54, 072202.	1.1	3
61	The 3-dimensional cube is the only periodic, connected cubic graph with perfect state transfer. Journal of Physics: Conference Series, 2010, 254, 012012.	0.4	2
62	Universal methods for extending any entanglement witness from the bipartite to the multipartite case. Physical Review A, 2014, 90, .	2.5	2
63	How to suppress dark states in quantum networks and bio-engineered structures. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 365306.	2.1	2
64	An example of graph limits of growing sequences of random graphs. Electronic Journal of Combinatorics, 2013, 4, 67-80.	0.1	2
65	Descriptive Complexity of Graph Spectra. Lecture Notes in Computer Science, 2016, , 183-199.	1.3	1
66	A Note on Observables for Counting Trails and Paths in Graphs. Mathematical Modelling and Algorithms, 2009, 8, 335-342.	0.5	0
67	Introduction for the special issue in honor of Chris Godsil. Journal of Algebraic Combinatorics, 2016, 43, 751-753.	0.8	0
68	Perturbation Theory in a Pure Exchange Non-Equilibrium Economy. SSRN Electronic Journal, 0, , .	0.4	0