

# ÄEaslav Brukner

## List of Publications by Year in descending order

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Version: 2024-02-01

76  
papers

6,032  
citations

109321

35  
h-index

98798

67  
g-index

77  
all docs

77  
docs citations

77  
times ranked

2767  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum superposition of spacetimes obeys Einstein's equivalence principle. <i>AVS Quantum Science</i> , 2022, 4, .	4.9	20
2	Inferring work by quantum superposing forward and time-reversal evolutions. <i>Physical Review Research</i> , 2022, 4, .	3.6	3
3	Noncausal Page-Wootters circuits. <i>Physical Review Research</i> , 2022, 4, .	3.6	13
4	Computational Advantage from a Quantum Superposition of Qubit Gate Orders. <i>Physical Review Letters</i> , 2022, 128, .	7.8	14
5	A no-go theorem for the persistent reality of Wigner's friend's perception. <i>Communications Physics</i> , 2021, 4, .	5.3	10
6	Relativistic Bell Test within Quantum Reference Frames. <i>Physical Review Letters</i> , 2021, 126, 230403.	7.8	20
7	Experimental quantum communication enhancement by superposing trajectories. <i>Physical Review Research</i> , 2021, 3, .	3.6	55
8	Reassessing the computational advantage of quantum-controlled ordering of gates. <i>Physical Review Research</i> , 2021, 3, .	3.6	7
9	Unruh effect for detectors in superposition of accelerations. <i>Physical Review D</i> , 2020, 102, .	4.7	16
10	Simulating Indefinite Causal Order With Rindler Observers. <i>Frontiers in Physics</i> , 2020, 8, .	2.1	6
11	Quantum Temporal Superposition: The Case of Quantum Field Theory. <i>Physical Review Letters</i> , 2020, 125, 131602.	7.8	32
12	Facts are relative. <i>Nature Physics</i> , 2020, 16, 1172-1174.	16.7	8
13	Quantum clocks and the temporal localisability of events in the presence of gravitating quantum systems. <i>Nature Communications</i> , 2020, 11, 2672.	12.8	57
14	Wigner's Friend as a Rational Agent. <i>Jerusalem Studies in Philosophy and History of Science</i> , 2020, , 91-99.	0.8	41
15	Bell's theorem for temporal order. <i>Nature Communications</i> , 2019, 10, 3772.	12.8	86
16	Comment on Healey's "Quantum Theory and the Limits of Objectivity". <i>Foundations of Physics</i> , 2019, 49, 741-749.	1.3	8
17	A spacetime area law bound on quantum correlations. <i>Npj Quantum Information</i> , 2019, 5, .	6.7	2
18	Communication through quantum-controlled noise. <i>Physical Review A</i> , 2019, 99, .	2.5	53

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19	Relativistic Quantum Reference Frames: The Operational Meaning of Spin. Physical Review Letters, 2019, 123, 090404.	7.8	44
20	Composition rules for quantum processes: a no-go theorem. New Journal of Physics, 2019, 21, 012001.	2.9	4
21	Quantum mechanics and the covariance of physical laws in quantum reference frames. Nature Communications, 2019, 10, 494.	12.8	133
22	Experimental Violation of Bell's Inequality for Temporal Orders. , 2019, , .		0
23	Information content of the gravitational field of a quantum superposition. International Journal of Modern Physics D, 2019, 28, 1943001.	2.1	28
24	Dynamics of Quantum Causal Structures. Physical Review X, 2018, 8, .	8.9	26
25	Observer-dependent locality of quantum events. New Journal of Physics, 2018, 20, 103031.	2.9	22
26	Quantum superposition of massive objects and the quantization of gravity. Physical Review D, 2018, 98, .	4.7	133
27	A No-Go Theorem for Observer-Independent Facts. Entropy, 2018, 20, 350.	2.2	91
28	Quantum formulation of the Einstein equivalence principle. Nature Physics, 2018, 14, 1027-1031.	16.7	74
29	Experimental Test of Bell's Inequality for Temporal Orders. , 2018, , .		0
30	Time dilation in quantum systems and decoherence. New Journal of Physics, 2017, 19, 025011.	2.9	45
31	Entanglement of quantum clocks through gravity. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E2303-E2309.	7.1	37
32	Focus on gravitational quantum physics. New Journal of Physics, 2017, 19, 050401.	2.9	26
33	Obtaining tight bounds on higher-order interferences with a 5-path interferometer. New Journal of Physics, 2017, 19, 033017.	2.9	37
34	Experimental verification of an indefinite causal order. Science Advances, 2017, 3, e1602589.	10.3	151
35	Experimental tests of indefinite causal orders. , 2017, , .		0
36	Quantum superpositions of "common-cause" and "direct-cause" causal structures. New Journal of Physics, 2017, 19, 123028.	2.9	12

#	ARTICLE	IF	CITATIONS
37	On the Quantum Measurement Problem. The Frontiers Collection, 2017, , 95-117.	0.2	74
38	Experimental Tests of Indefinite Causal Orders. , 2017, , .		0
39	Macroscopic Quantum Resonators (MAQRO): 2015 update. EPJ Quantum Technology, 2016, 3, .	6.3	77
40	Exponential Communication Complexity Advantage from Quantum Superposition of the Direction of Communication. Physical Review Letters, 2016, 117, 100502.	7.8	127
41	Appearance of causality in process matrices when performing fixed-basis measurements for two parties. Physical Review A, 2016, 93, .	2.5	6
42	Quantum and classical phases in optomechanics. Physical Review A, 2016, 93, .	2.5	14
43	The simplest causal inequalities and their violation. New Journal of Physics, 2016, 18, 013008.	2.9	68
44	Reply to 'Questioning universal decoherence due to gravitational time dilation'. Nature Physics, 2016, 12, 2-3.	16.7	4
45	Quantum superposition of the order of parties as a communication resource. Physical Review A, 2015, 92, .	2.5	85
46	Universal decoherence due to gravitational time dilation. Nature Physics, 2015, 11, 668-672.	16.7	187
47	Witnessing causal nonseparability. New Journal of Physics, 2015, 17, 102001.	2.9	134
48	Experimental superposition of orders of quantum gates. Nature Communications, 2015, 6, 7913.	12.8	193
49	A graph-separation theorem for quantum causal models. New Journal of Physics, 2015, 17, 073020.	2.9	56
50	Quantum circuits cannot control unknown operations. New Journal of Physics, 2014, 16, 093026.	2.9	51
51	Computational Advantage from Quantum-Controlled Ordering of Gates. Physical Review Letters, 2014, 113, 250402.	7.8	198
52	Quantum non-locality it ain't necessarily so.... Journal of Physics A: Mathematical and Theoretical, 2014, 47, 424009.	2.1	39
53	Quantum causality. Nature Physics, 2014, 10, 259-263.	16.7	106
54	Condition for macroscopic realism beyond the Leggett-Garg inequalities. Physical Review A, 2013, 87, .	2.5	152

#	ARTICLE	IF	CITATIONS
55	Bound entanglement helps to reduce communication complexity. <i>Physical Review A</i> , 2013, 87, .	2.5	13
56	Experimental multipartner quantum communication complexity employing just one qubit. <i>Natural Computing</i> , 2013, 12, 19-26.	3.0	2
57	General relativistic effects in quantum interference of photons. <i>Classical and Quantum Gravity</i> , 2012, 29, 224010.	4.0	69
58	Quantum correlations with no causal order. <i>Nature Communications</i> , 2012, 3, 1092.	12.8	446
59	Quantum discord as resource for remote state preparation. <i>Nature Physics</i> , 2012, 8, 666-670.	16.7	397
60	Ein quantenoptischer Blick auf die Planck-Skala?. <i>Physik in Unserer Zeit</i> , 2012, 43, 163-164.	0.0	0
61	Probing Planck-scale physics with quantum optics. <i>Nature Physics</i> , 2012, 8, 393-397.	16.7	473
62	Experimental delayed-choice entanglement swapping. <i>Nature Physics</i> , 2012, 8, 479-484.	16.7	171
63	Quantum-state preparation with universal gate decompositions. <i>Physical Review A</i> , 2011, 83, .	2.5	149
64	Reply to "Comment on "Mutually unbiased bases, orthogonal Latin squares, and hidden-variable models". <i>Physical Review A</i> , 2011, 83, .	2.5	1
65	Quantum interferometric visibility as a witness of general relativistic proper time. <i>Nature Communications</i> , 2011, 2, 505.	12.8	159
66	Necessary and Sufficient Condition for Nonzero Quantum Discord. <i>Physical Review Letters</i> , 2010, 105, 190502.	7.8	1,026
67	Entanglement and communication-reducing properties of noisy N-qubit states. <i>Physical Review A</i> , 2010, 81, .	2.5	17
68	Entanglement between smeared field operators in the Klein-Gordon vacuum. <i>Physical Review D</i> , 2010, 81, .	4.7	12
69	Mutually unbiased bases, orthogonal Latin squares, and hidden-variable models. <i>Physical Review A</i> , 2009, 79, .	2.5	37
70	Quantum complementarity and logical indeterminacy. <i>Natural Computing</i> , 2009, 8, 449-453.	3.0	1
71	Information Invariance and Quantum Probabilities. <i>Foundations of Physics</i> , 2009, 39, 677-689.	1.3	62
72	Generalized probability rules from a timeless formulation of Wigner's friend scenarios. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 5, 524.	0.0	10

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73	A purification postulate for quantum mechanics with indefinite causal order. Quantum - the Open Journal for Quantum Science, 0, 1, 10.	0.0	47
74	Semi-device-independent certification of indefinite causal order. Quantum - the Open Journal for Quantum Science, 0, 3, 176.	0.0	15
75	Does violation of a Bell inequality always imply quantum advantage in a communication complexity problem?. Quantum - the Open Journal for Quantum Science, 0, 4, 316.	0.0	14
76	Experimental entanglement of temporal order. Quantum - the Open Journal for Quantum Science, 0, 6, 621.	0.0	24