Dorje C Brody

List of Publications by Year
in descending order

126	5,495	136950	82547
papers	citations	32 h-index	72 g-index

130	130	130	2431
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Informed traders. , 2022, , 87-106.		1
2	Modelling Information Flows in Financial Markets. , 2022, , 157-177.		0
3	Beyond Hazard Rates: A New Framework for Credit-Risk Modelling. , 2022, , 1-27.		0
4	Mathematical Models for Fake News. , 2022, , 405-423.		5
5	Open quantum dynamics for plant motions. Scientific Reports, 2022, 12, 3042.	3.3	1
6	Dam rain and cumulative gain. , 2022, , 65-86.		0
7	INFORMATION-BASED ASSET PRICING. , 2022, , 29-64.		0
8	On the Pricing of Storable Commodities. , 2022, , 393-404.		1
9	Credit Risk, Market Sentiment and Randomly-Timed Default. , 2022, , 113-126.		0
10	Noise, Fake News, and Tenacious Bayesians. Frontiers in Psychology, 2022, 13, .	2.1	2
11	Quantum measurement of space-time events. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 235304.	2.1	4
12	PT symmetry and the evolution speed in open quantum systems ¹. Journal of Physics: Conference Series, 2021, 2038, 012005.	0.4	2
13	Theory of Cryptocurrency Interest Rates. SIAM Journal on Financial Mathematics, 2020, 11, 148-168.	1.3	2
14	Modelling election dynamics and the impact of disinformation. Information Geometry, 2019, 2, 209-230.	1.2	7
15	Operator-valued zeta functions and Fourier analysis. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 345201.	2.1	2
16	Evolution speed of open quantum dynamics. Physical Review Research, 2019, 1, .	3.6	24
17	Asymptotic analysis on a pseudo-Hermitian Riemann-zeta Hamiltonian. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 135203.	2.1	4
18	SOCIAL DISCOUNTING AND THE LONG RATE OF INTEREST. Mathematical Finance, 2018, 28, 306-334.	1.8	13

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19	LÃ‰VYâ€“VASICEK MODELS AND THE LONG-BOND RETURN PROCESS. International Journal of Theoretical and Applied Finance, 2018, 21, 1850026.	0.5	3
20	Biorthogonal systems on unit interval and zeta dilation operators. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 285202.	2.1	2
21	Hamiltonian for the Zeros of the Riemann Zeta Function. Physical Review Letters, 2017, 118, 130201.	7.8	69
22	PT-symmetry, indefinite metric, and nonlinear quantum mechanics. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 485202.	2.1	5
23	Geometric Aspects of Space-Time Reflection Symmetry in Quantum Mechanics. Springer Proceedings in Physics, 2016, , 185-199.	0.2	1
24	A Riemannian approach to Randers geodesics. Journal of Geometry and Physics, 2016, 106, 98-101.	1.4	4
25	Thermodynamics of quantum heat bath. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 425302.	2.1	15
26	Consistency of PT-symmetric quantum mechanics. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 10LT03.	2.1	50
27	Fragile entanglement statistics. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 425301.	2.1	1
28	Universal Quantum Measurements. Journal of Physics: Conference Series, 2015, 624, 012002.	0.4	0
29	Solution to the Quantum Zermelo Navigation Problem. Physical Review Letters, 2015, 114, 100502.	7.8	38
30	Time-optimal navigation through quantum wind. New Journal of Physics, 2015, 17, 033048.	2.9	42
31	COHERENT CHAOS INTEREST-RATE MODELS. International Journal of Theoretical and Applied Finance, 2015, 18, 1550016.	0.5	0
32	Elementary solution to the time-independent quantum navigation problem. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 055302.	2.1	9
33	Pricing of Defaultable Bonds with Random Information Flow. Applied Mathematical Finance, 2015, 22, 399-420.	1.2	3
34	Biorthogonal quantum mechanics. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 035305.	2.1	302
35	PT -symmetric quantum state discrimination. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120160.	3.4	28
36	Information Geometry of Complex Hamiltonians and Exceptional Points. Entropy, 2013, 15, 3361-3378.	2.2	30

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37	Geometry of the complex extension of Wigner's theorem. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 395301.	2.1	1
38	LÃ©vy information and the aggregation of risk aversion. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130024.	2.1	1
39	Signal processing with LÃ©vy information. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120433.	2.1	6
40	General theory of geometric LÃ©vy models for dynamic asset pricing. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 1778-1798.	2.1	19
41	Rational term structure models with geometric LÃ©vy martingales. Stochastics, 2012, 84, 719-740.	1.1	7
42	INFORMATION-BASED ASSET PRICING. , 2012, , 115-150.		2
43	Mixed-State Evolution in the Presence of Gain and Loss. Physical Review Letters, 2012, 109, 230405.	7.8	113
44	Quantum Splines. Physical Review Letters, 2012, 109, 100501.	7.8	7
45	Informational inefficiency in financial markets. Mathematics and Financial Economics, 2012, 6, 249-259.	1.7	6
46	Six-dimensional space-time from quaternionic quantum mechanics. Physical Review D, 2011, 84, .	4.7	16
47	On complexified mechanics and coquaternions. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 072001.	2.1	41
48	Information geometry of density matrices and state estimation. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 252002.	2.1	23
49	Modelling Information Flows in Financial Markets. , 2011, , 133-153.		10
50	Effects of quantum entanglement in phase transitions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 2424-2428.	2.1	1
51	Nonlinearity and constrained quantum motion. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 082003.	2.1	7
52	Coherent states and rational surfaces. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 255205.	2.1	14
53	Information and asset pricing. , 2010, , .		0
54	Metric approach to quantum constraints. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 295303.	2.1	9

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55	Informed traders. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 1103-1122.	2.1	29
56	Dequantization of the Dirac monopole. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 3047-3068.	2.1	0
57	Optimal Time Evolution for Hermitian and Non-Hermitian Hamiltonians. Lecture Notes in Physics, 2009, , 341-361.	0.7	14
58	Information geometry in vapourâ€“liquid equilibrium. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 023001.	2.1	65
59	Random Hamiltonian in thermal equilibrium. Journal of Physics: Conference Series, 2009, 174, 012041.	0.4	2
60	INFORMATION-BASED ASSET PRICING. International Journal of Theoretical and Applied Finance, 2008, 11, 107-142.	0.5	69
61	Dam rain and cumulative gain. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 1801-1822.	2.1	35
62	Symplectic approach to quantum constraints. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 475301.	2.1	15
63	Comment on â€œTypicality for Generalized Microcanonical Ensemblesâ€• Physical Review Letters, 2008, 100, 148901; discussion 148902.	7.8	4
64	Hamiltonian statistical mechanics. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 502002.	2.1	6
65	Quantum effects in classical systems having complex energy. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 352003.	2.1	46
66	TERM STRUCTURE OF VANILLA OPTIONS. International Journal of Theoretical and Applied Finance, 2007, 10, 1323-1337.	0.5	1
67	On quantum microcanonical equilibrium. Journal of Physics: Conference Series, 2007, 67, 012025.	0.4	8
68	-symmetric extension of the Korteweg-de Vries equation. Journal of Physics A: Mathematical and Theoretical, 2007, 40, F153-F160.	2.1	48
69	A note on exponential families of distributions. Journal of Physics A: Mathematical and Theoretical, 2007, 40, F691-F695.	2.1	6
70	Unitarity, ergodicity and quantum thermodynamics. Journal of Physics A: Mathematical and Theoretical, 2007, 40, F503-F509.	2.1	17
71	Faster than Hermitian Quantum Mechanics. Physical Review Letters, 2007, 98, 040403.	7.8	320
72	Entanglement of three-qubit geometry. Journal of Physics: Conference Series, 2007, 67, 012044.	0.4	12

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73	Quantum phase transitions without thermodynamic limits. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 2021-2030.	2.1	27
74	Option price calibration from RÃ©nyi entropy. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 366, 298-307.	2.1	27
75	Beyond Hazard Rates: A New Framework for Credit-Risk Modelling. Applied and Numerical Harmonic Analysis, 2007, , 231-257.	0.3	35
76	Semiclassical analysis of a complex quartic Hamiltonian. Physical Review D, 2006, 73, .	4.7	6
77	On optimum Hamiltonians for state transformations. Journal of Physics A, 2006, 39, L167-L170.	1.6	69
78	Equivalence of a complexPT-symmetric quartic Hamiltonian and a Hermitian quartic Hamiltonian with an anomaly. Physical Review D, 2006, 74, .	4.7	75
79	Exactly solvable quantum state reduction models with time-dependent coupling. Journal of Physics A, 2006, 39, 11029-11051.	1.6	4
80	Quantum noise and stochastic reduction. Journal of Physics A, 2006, 39, 833-876.	1.6	21
81	Entropic calibration revisited. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 337, 257-264.	2.1	9
82	Theory of quantum space-time. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 2679-2699.	2.1	6
83	Finite-time stochastic reduction models. Journal of Mathematical Physics, 2005, 46, 082101.	1.1	15
84	Solvable model of quantum microcanonical states. Journal of Physics A, 2005, 38, L607-L613.	1.6	16
85	Unusual quantum states: nonâ€“locality, entropy, Maxwell's demon and fractals. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 733-753.	2.1	19
86	Shapes of quantum states. Journal of Physics A, 2004, 37, 251-257.	1.6	1
87	Extension ofPT-symmetric quantum mechanics to quantum field theory with cubic interaction. Physical Review D, 2004, 70, .	4.7	200
88	Scalar Quantum Field Theory with a Complex Cubic Interaction. Physical Review Letters, 2004, 93, 251601.	7.8	117
89	Preposterior analysis for option pricing. Quantitative Finance, 2004, 4, 465-477.	1.7	6
90	Chaos and coherence: a new framework for interestâ€“rate modelling. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 85-110.	2.1	37

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91	Must a Hamiltonian be Hermitian?. American Journal of Physics, 2003, 71, 1095-1102.	0.7	318
92	Information geometry of finite Ising models. Journal of Geometry and Physics, 2003, 47, 207-220.	1.4	34
93	Relaxation of quantum states under energy perturbations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 2297-2316.	2.1	7
94	Elementary derivation for passage times. Journal of Physics A, 2003, 36, 5587-5593.	1.6	74
95	On powers of Bessel functions. Journal of Mathematical Physics, 2003, 44, 309-314.	1.1	16
96	Efficient simulation of quantum state reduction. Journal of Mathematical Physics, 2002, 43, 5254-5261.	1.1	24
97	Stochastic reduction in nonlinear quantum mechanics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 1117-1127.	2.1	13
98	Entropy and temperature of a quantum Carnot engine. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 1519-1526.	2.1	70
99	Complex Extension of Quantum Mechanics. Physical Review Letters, 2002, 89, 270401.	7.8	1,416
100	Interest rates and information geometry. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 1343-1363.	2.1	36
101	Applications of information geometry to interest rate theory. AIP Conference Proceedings, 2001, , .	0.4	0
102	Geometric quantum mechanics. Journal of Geometry and Physics, 2001, 38, 19-53.	1.4	254
103	Differential renormalisation flow in random lattice gauge theories. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 485, 422-428.	4.1	1
104	Quantum mechanical Carnot engine. Journal of Physics A, 2000, 33, 4427-4436.	1.6	205
105	Information content for quantum states. Journal of Mathematical Physics, 2000, 41, 2586-2592.	1.1	12
106	Discrete uncertainty relations. Journal of Physics A, 1999, 32, 4921-4930.	1.6	6
107	Thermalization of quantum states. Journal of Mathematical Physics, 1999, 40, 12-18.	1.1	14
108	Quantum field theory of partitions. Journal of Mathematical Physics, 1999, 40, 3239-3245.	1.1	19

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109	Geometrization of statistical mechanics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1999, 455, 1683-1715.	2.1	54
110	Geometry of thermodynamic states. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 245, 73-78.	2.1	7
111	On the symmetry of real-space renormalisation. Nuclear Physics B, 1998, 522, 588-604.	2.5	24
112	Statistical geometry in quantum mechanics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1998, 454, 2445-2475.	2.1	72
113	The quantum canonical ensemble. Journal of Mathematical Physics, 1998, 39, 6502-6508.	1.1	36
114	Generalised Heisenberg relations for quantum statistical estimation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 236, 257-262.	2.1	20
115	Restoration of isotropy for spin models. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 233, 430-436.	2.1	5
116	Bayesian inference in quantum systems. Physica A: Statistical Mechanics and Its Applications, 1996, 223, 348-364.	2.6	4
117	Minimum Decision Cost for Quantum Ensembles. Physical Review Letters, 1996, 76, 1-5.	7.8	54
118	Geometry of Quantum Statistical Inference. Physical Review Letters, 1996, 77, 2851-2854.	7.8	51
119	An upper bound for entropy production. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 204, 93-98.	2.1	32
120	Topological variants of lattice field models. Physica A: Statistical Mechanics and Its Applications, 1995, 213, 315-336.	2.6	3
121	Geometrical aspects of statistical mechanics. Physical Review E, 1995, 51, 1006-1011.	2.1	102
122	One-dimensional spherical model with a phase transition. Physical Review E, 1994, 49, 3665-3669.	2.1	2
123	Social Discounting and the Long Rate of Interest. SSRN Electronic Journal, 0, , .	0.4	3
124	Higher-order uncertainty bounds for mixed states. Journal of Physics A: Mathematical and Theoretical, 0, , .	2.1	1
125	Noise, Risk Premium, and Bubble. SSRN Electronic Journal, 0, , .	0.4	1
126	General Theory of Geometric LÃ©vy Models for Dynamic Asset Pricing. SSRN Electronic Journal, 0, , .	0.4	0