

Jerzy Jurkiewicz

List of Publications by Year in descending order

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138
papers

5,299
citations

94433

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69
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138
all docs

138
docs citations

138
times ranked

1069
citing authors

#	ARTICLE	IF	CITATIONS
1	The Spectral Dimension of the Universe is Scale Dependent. <i>Physical Review Letters</i> , 2005, 95, 171301.	7.8	380
2	Nonperturbative quantum gravity. <i>Physics Reports</i> , 2012, 519, 127-210.	25.6	312
3	Emergence of a 4D World from Causal Quantum Gravity. <i>Physical Review Letters</i> , 2004, 93, 131301.	7.8	301
4	Reconstructing the Universe. <i>Physical Review D</i> , 2005, 72, .	4.7	276
5	Multiloop correlators for two-dimensional quantum gravity. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1990, 251, 517-524.	4.1	229
6	Dynamically triangulating Lorentzian quantum gravity. <i>Nuclear Physics B</i> , 2001, 610, 347-382.	2.5	203
7	Four-dimensional simplicial quantum gravity. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1992, 278, 42-50.	4.1	159
8	Nonperturbative Lorentzian Path Integral for Gravity. <i>Physical Review Letters</i> , 2000, 85, 924-927.	7.8	149
9	Planckian Birth of a Quantum de Sitter Universe. <i>Physical Review Letters</i> , 2008, 100, 091304.	7.8	116
10	On the fractal structure of two-dimensional quantum gravity. <i>Nuclear Physics B</i> , 1995, 454, 313-342.	2.5	115
11	Nonperturbative quantum de Sitter universe. <i>Physical Review D</i> , 2008, 78, .	4.7	106
12	Semiclassical universe from first principles. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2005, 607, 205-213.	4.1	96
13	The universe from scratch. <i>Contemporary Physics</i> , 2006, 47, 103-117.	1.8	95
14	Wealth condensation in pareto macroeconomies. <i>Physical Review E</i> , 2002, 65, 026102.	2.1	93
15	Second-Order Phase Transition in Causal Dynamical Triangulations. <i>Physical Review Letters</i> , 2011, 107, 211303.	7.8	93
16	Nonperturbative 3D Lorentzian quantum gravity. <i>Physical Review D</i> , 2001, 64, .	4.7	80
17	The theory of dynamical random surfaces with extrinsic curvature. <i>Nuclear Physics B</i> , 1993, 393, 571-600.	2.5	76
18	CDT meets Hořava-Lifshitz gravity. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2010, 690, 413-419.	4.1	76

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19	Signal and noise in correlation matrix. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 343, 295-310.	2.6	75
20	Scaling in four-dimensional quantum gravity. <i>Nuclear Physics B</i> , 1995, 451, 643-676.	2.5	73
21	Regularization of one-matrix models. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1990, 245, 178-184.	4.1	68
22	A numerical study of discrete euclidean polyakov surfaces. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986, 168, 273-278.	4.1	64
23	Second- and first-order phase transitions in causal dynamical triangulations. <i>Physical Review D</i> , 2012, 85, .	4.7	61
24	The semiclassical limit of causal dynamical triangulations. <i>Nuclear Physics B</i> , 2011, 849, 144-165.	2.5	60
25	Twist as a Probe for Phase Structure. <i>Physica Scripta</i> , 1981, 23, 1022-1031.	2.5	59
26	Phase structure of $U(N\hat{+}\hat{z})$ gauge theory on a two-dimensional lattice for a broad class of variant actions. <i>Nuclear Physics B</i> , 1983, 220, 167-184.	2.5	54
27	Quantum gravity, dynamical triangulations and higher-derivative regularization. <i>Nuclear Physics B</i> , 1993, 393, 601-629.	2.5	54
28	Zero-momentum contribution to wilson loops in periodic boxes. <i>Nuclear Physics B</i> , 1985, 262, 67-94.	2.5	51
29	Network transitivity and matrix models. <i>Physical Review E</i> , 2004, 69, 026106.	2.1	51
30	Renormalization group flow in CDT. <i>Classical and Quantum Gravity</i> , 2014, 31, 165003.	4.0	51
31	Critical exponents in a model of dynamically triangulated random surfaces. <i>Nuclear Physics B</i> , 1987, 290, 218-230.	2.5	46
32	Spectral moments of correlated Wishart matrices. <i>Physical Review E</i> , 2005, 71, 026111.	2.1	46
33	A grand-canonical ensemble of randomly triangulated surfaces. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986, 177, 89-92.	4.1	44
34	Observing 4d baby universes in quantum gravity. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1993, 305, 208-213.	4.1	43
35	Infinite products of large random matrices and matrix-valued diffusion. <i>Nuclear Physics B</i> , 2003, 670, 479-507.	2.5	42
36	Ising spins on a dynamically triangulated random surface. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1988, 213, 511-515.	4.1	41

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37	Critical properties of the dynamical random surface with extrinsic curvature. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 275, 295-303.	4.1	41
38	Signal and noise in financial correlation matrices. Physica A: Statistical Mechanics and Its Applications, 2004, 344, 67-72.	2.6	40
39	Lorentzian 3d gravity with wormholes via matrix models. Journal of High Energy Physics, 2001, 2001, 022-022.	4.7	37
40	Evidence for asymptotic safety from dimensional reduction in causal dynamical triangulations. Journal of High Energy Physics, 2015, 2015, 1.	4.7	37
41	Dirac spectrum in QCD and quark masses. Nuclear Physics B, 1996, 478, 605-626.	2.5	36
42	Free random $L\tilde{A}$ matrices. Physical Review E, 2002, 65, 021106.	2.1	34
43	Quantum Gravity as Sum over Spacetimes. Lecture Notes in Physics, 2010, , 59-124.	0.7	34
44	Euclidian 4d quantum gravity with a non-trivial measure term. Journal of High Energy Physics, 2013, 2013, 1.	4.7	32
45	The Self-Organizing Quantum Universe. Scientific American, 2008, 299, 42-49.	1.0	29
46	A Lorentzian cure for Euclidean troubles. Nuclear Physics, Section B, Proceedings Supplements, 2002, 106-107, 977-979.	0.4	28
47	Applying free random variables to random matrix analysis of financial data. Part I: The Gaussian case. Quantitative Finance, 2011, 11, 1103-1124.	1.7	28
48	The effective action in 4-dim CDT. The transfer matrix approach. Journal of High Energy Physics, 2014, 2014, 1.	4.7	28
49	Characteristics of the new phase in CDT. European Physical Journal C, 2017, 77, 152.	3.9	28
50	Geometry of the quantum universe. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 690, 420-426.	4.1	26
51	Signature change of the metric in CDT quantum gravity?. Journal of High Energy Physics, 2015, 2015, 1.	4.7	26
52	Abelian gauge fields coupled to simplicial quantum gravity. Journal of High Energy Physics, 1999, 1999, 016-016.	4.7	25
53	On the size of a Polyakov surface. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1984, 148, 148-152.	4.1	24
54	Free random $L\tilde{A}$ and Wigner- $L\tilde{A}$ matrices. Physical Review E, 2007, 75, 051126.	2.1	24

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55	Four-dimensional CDT with toroidal topology. Nuclear Physics B, 2017, 922, 226-246.	2.5	24
56	New higher-order transition in causal dynamical triangulations. Physical Review D, 2017, 95, .	4.7	24
57	Effective sampling of random surfaces by baby universe surgery. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 325, 337-346.	4.1	23
58	On the exponential bound in four dimensional simplicial gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 335, 355-358.	4.1	22
59	Tree networks with causal structure. Physical Review E, 2003, 67, 066106.	2.1	22
60	Perturbing general uncorrelated networks. Physical Review E, 2004, 70, 026106.	2.1	22
61	Impact of topology in causal dynamical triangulations quantum gravity. Physical Review D, 2016, 94, .	4.7	22
62	The phase structure of causal dynamical triangulations with toroidal spatial topology. Journal of High Energy Physics, 2018, 2018, 1.	4.7	21
63	Local order parameter in twisted gauge fields. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1980, 92, 312-314.	4.1	20
64	Dynamical triangulations, a gateway to quantum gravity?. Journal of Mathematical Physics, 1995, 36, 6299-6339.	1.1	20
65	Branched polymers with loops. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 392, 291-297.	4.1	20
66	Renormalization of 3d quantum gravity from matrix models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 581, 255-262.	4.1	19
67	Quantum Gravity: the art of building spacetime. , 2009, , 341-359.		19
68	Renormalization in Quantum Theories of Geometry. Frontiers in Physics, 2020, 8, .	2.1	19
69	The transfer matrix in four-dimensional CDT. Journal of High Energy Physics, 2012, 2012, 1.	4.7	18
70	CAUSAL DYNAMICAL TRIANGULATIONS AND THE SEARCH FOR A THEORY OF QUANTUM GRAVITY. International Journal of Modern Physics D, 2013, 22, 1330019.	2.1	18
71	Searching for a continuum limit in causal dynamical triangulation quantum gravity. Physical Review D, 2016, 93, .	4.7	18
72	3d Lorentzian, dynamically triangulated quantum gravity. Nuclear Physics, Section B, Proceedings Supplements, 2002, 106-107, 980-982.	0.4	17

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73	Lattice gauge theory with Higgs matter field in the adjoint representation. Physical Review D, 1984, 29, 2982-2985.	4.7	15
74	Free LÃ©vy matrices and financial correlations. Physica A: Statistical Mechanics and Its Applications, 2004, 343, 694-700.	2.6	15
75	Exploring the new phase transition of CDT. Journal of High Energy Physics, 2016, 2016, 1.	4.7	15
76	Four-dimensional dynamically triangulated gravity coupled to matter. Physical Review D, 1993, 48, 3695-3703.	4.7	14
77	Correlated Wishart matrices and critical horizons. European Physical Journal B, 2006, 49, 319-323.	1.5	14
78	Pseudo-topological transitions in 2D gravity models coupled to massless scalar fields. Nuclear Physics B, 2012, 863, 421-434.	2.5	14
79	CDT Quantum Toroidal Spacetimes: An Overview. Universe, 2021, 7, 79.	2.5	14
80	Quantum Gravity via Causal Dynamical Triangulations. , 2014, , 723-741.		14
81	Z2 GAUGE MATTER COUPLED TO 4-D SIMPLICIAL QUANTUM GRAVITY. Modern Physics Letters A, 1994, 09, 2527-2541.	1.2	13
82	PadÃ© approximants on a lattice. Nuclear Physics B, 1978, 135, 416-428.	2.5	12
83	Large-N universality of variant actions. Nuclear Physics B, 1984, 233, 457-476.	2.5	11
84	Chaotic behaviour in one-matrix models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 261, 260-268.	4.1	11
85	3D quantum gravity coupled to matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 297, 253-260.	4.1	11
86	Lorentzian and Euclidean Quantum Gravity â€” Analytical and Numerical Results. , 2000, , 381-450.		11
87	Causal dynamical triangulations and the quest for quantum gravity. , 2012, , 321-337.		10
88	Classification of networks of automata by dynamical mean-field theory. Journal of Physics A, 1990, 23, 3073-3081.	1.6	10
89	Towards an UV fixed point in CDT gravity. Journal of High Energy Physics, 2019, 2019, 1.	4.7	10
90	On a new formulation of the continuum Heisenberg spin system in a space of arbitrary dimensionality. Physica A: Statistical Mechanics and Its Applications, 1980, 103, 573-585.	2.6	9

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91	Computer simulations of 3-d Lorentzian quantum gravity. Nuclear Physics, Section B, Proceedings Supplements, 2001, 94, 689-692.	0.4	9
92	THE SELF-ORGANIZED DE SITTER UNIVERSE. International Journal of Modern Physics D, 2008, 17, 2515-2520.	2.1	9
93	Wilson loops in nonperturbative quantum gravity. Physical Review D, 2015, 92, .	4.7	9
94	A comment on the nonperturbative d=1 string theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1990, 243, 373-377.	4.1	8
95	Computational ergodicity of S4. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 345, 435-440.	4.1	8
96	Deriving spacetime from first principles. Annalen Der Physik, 2010, 19, 186-195.	2.4	8
97	The higher-order phase transition in toroidal CDT. Journal of High Energy Physics, 2020, 2020, 1.	4.7	8
98	Wilson fermions on a randomly triangulated manifold. Physical Review D, 1999, 60, .	4.7	7
99	Free random Lévy variables and financial probabilities. Physica A: Statistical Mechanics and Its Applications, 2001, 299, 181-187.	2.6	7
100	Statistical mechanics of random graphs. Physica A: Statistical Mechanics and Its Applications, 2004, 344, 56-61.	2.6	7
101	A $c = 1$ phase transition in two-dimensional CDT/Horava-Lifshitz gravity?. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 743, 435-439.	4.1	7
102	The microscopic structure of 2D CDT coupled to matter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 746, 359-364.	4.1	7
103	Critical phenomena in causal dynamical triangulations. Classical and Quantum Gravity, 2019, 36, 224001.	4.0	7
104	Pseudo-Cartesian coordinates in a model of Causal Dynamical Triangulations. Nuclear Physics B, 2019, 943, 114626.	2.5	7
105	Simplicial quantum gravity on a computer. Computer Physics Communications, 1995, 85, 278-292.	7.5	6
106	On diffusion of large matrices. New Journal of Physics, 2005, 7, 54-54.	2.9	6
107	Scalar fields in causal dynamical triangulations. Classical and Quantum Gravity, 2021, 38, 195030.	4.0	6
108	Matter-Driven Change of Spacetime Topology. Physical Review Letters, 2021, 127, 161301.	7.8	6

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109	Convergence properties of the Pad \hat{A} approximants on a lattice. Nuclear Physics B, 1978, 145, 445-458.	2.5	5
110	Intermittency and clustering in the 1D lattice gas model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 265, 133-136.	4.1	5
111	Simplicial gravity and random surfaces. Nuclear Physics, Section B, Proceedings Supplements, 1993, 30, 108-121.	0.4	5
112	Three-dimensional simplicial quantum gravity coupled to Ising matter. Nuclear Physics, Section B, Proceedings Supplements, 1993, 30, 771-774.	0.4	5
113	Search for scaling dimensions for random surfaces with $c = 1$. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 342, 58-65.	4.1	5
114	The spectral dimension in 2D CDT gravity coupled to scalar fields. Modern Physics Letters A, 2015, 30, 1550077.	1.2	5
115	Properties of dynamical fractal geometries in the model of causal dynamical triangulations. Physical Review D, 2021, 103, .	4.7	5
116	Cosmic voids and filaments from quantum gravity. European Physical Journal C, 2021, 81, 1.	3.9	5
117	How to eliminate the phase transition in Wadia's model of gauge theory on a lattice. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1982, 115, 143-144.	4.1	4
118	corrections in two-dimensional lattice gauge system with mixed action. Nuclear Physics B, 1984, 242, 62-68.	2.5	4
119	Ising model on a random lattice with a topology of a torus. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1988, 214, 425-428.	4.1	3
120	Measuring the string tension in random surface models with extrinsic curvature. Computer Physics Communications, 1992, 70, 59-68.	7.5	3
121	Renormalisation group flow in an exactly solvable model with fluctuating geometry. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 379, 93-98.	4.1	3
122	The transfer matrix in four dimensional causal dynamical triangulations. , 2013, , .		3
123	Quantum spacetime, from a practitioner's point of view. , 2013, , .		3
124	Ground State Metamorphosis for Yang-Mills Fields on a Finite Periodic Lattice. , 1987, , 339-358.		3
125	THE EMERGENCE OF (EUCLIDEAN) DE SITTER SPACE-TIME. , 2008, , .		3
126	Recent results in CDT quantum gravity. , 2017, , .		3

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127	Swendsen-Wang dynamics for the Potts model on a dynamically triangulated random surface. Computer Physics Communications, 1992, 70, 510-520.	7.5	2
128	Correlation functions and critical behaviour on fluctuating geometries. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 421, 86-92.	4.1	2
129	Random walkers versus random crowds: Diffusion of large matrices. Chemical Physics, 2010, 375, 380-385.	1.9	2
130	Universality of dynamically triangulated random surfaces in one-dimensional target space. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 279, 41-46.	4.1	1
131	Comparison of eigeninference based on one- and two-point Green's functions. Physical Review E, 2015, 92, 022111.	2.1	1
132	CAUSAL DYNAMICAL TRIANGULATIONS AND THE SEARCH FOR A THEORY OF QUANTUM GRAVITY., 2015, , .		1
133	On the structure of nonleading logarithms. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1980, 92, 160-162.	4.1	0
134	Weak-coupling universality in SU(3) mixed actions: Theory versus high-statistics simulation. Physical Review D, 1985, 32, 1044-1047.	4.7	0
135	A random surface theory with non-trivial \hat{P} string. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 341, 286-292.	4.1	0
136	Intrinsic geometry of $c=1$ random surfaces. Nuclear Physics, Section B, Proceedings Supplements, 1995, 42, 701-703.	0.4	0
137	Computational ergodicity in simplicial quantum gravity. Nuclear Physics, Section B, Proceedings Supplements, 1995, 42, 704-706.	0.4	0
138	Quantum gravity, from the entropy of geometries. Europhysics News, 2011, 42, 25-28.	0.3	0