Michael Creutz

List of Publications by Year
in descending order

99 papers	5,563 citations	136950 32 h-index	76900 74 g-index
101 all docs	101 docs citations	101 times ranked	1942 citing authors

#	Article	IF	Citations
1	Monte Carlo study of quantized SU(2) gauge theory. Physical Review D, 1980, 21, 2308-2315.	4.7	548
2	Microcanonical Monte Carlo Simulation. Physical Review Letters, 1983, 50, 1411-1414.	7.8	493
3	Confinement and the Critical Dimensionality of Space-Time. Physical Review Letters, 1979, 43, 553-556.	7.8	381
4	Asymptotic-Freedom Scales. Physical Review Letters, 1980, 45, 313-316.	7.8	359
5	Self-organized criticality in the 'Game of Life". Nature, 1989, 342, 780-782.	27.8	325
6	Overrelaxation and Monte Carlo simulation. Physical Review D, 1987, 36, 515-519.	4.7	323
7	Experiments with a Gauge-Invariant Ising System. Physical Review Letters, 1979, 42, 1390-1393.	7.8	318
8	Monte Carlo computations in lattice gauge theories. Physics Reports, 1983, 95, 201-282.	25.6	256
9	Monte Carlo study of Abelian lattice gauge theories. Physical Review D, 1979, 20, 1915-1922.	4.7	212
10	Deterministic ising dynamics. Annals of Physics, 1986, 167, 62-72.	2.8	203
11	End States, Ladder Compounds, and Domain-Wall Fermions. Physical Review Letters, 1999, 83, 2636-2639.	7.8	138
12	Gauge fixing, the transfer matrix, and confinement on a lattice. Physical Review D, 1977, 15, 1128-1136.	4.7	130
13	Higher-order hybrid Monte Carlo algorithms. Physical Review Letters, 1989, 63, 9-12.	7.8	129
14	Variant actions and phase structure in lattice gauge theory. Physical Review D, 1981, 24, 3212-3217.	4.7	126
15	On invariant integration over SU(N). Journal of Mathematical Physics, 1978, 19, 2043.	1.1	104
16	Global Monte Carlo algorithms for many-fermion systems. Physical Review D, 1988, 38, 1228-1238.	4.7	96
17	Aspects of chiral symmetry and the lattice. Reviews of Modern Physics, 2001, 73, 119-150.	45.6	82
18	Phase Transition in SU(5) Lattice Gauge Theory. Physical Review Letters, 1981, 46, 1441-1443.	7.8	73

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19	Phase diagram ofZ(N)and U(1) gauge theories in three dimensions. Physical Review D, 1980, 21, 2892-2902.	4.7	69
20	Quark masses and chiral symmetry. Physical Review D, 1995, 52, 2951-2959.	4.7	60
21	Surface states and chiral symmetry on the lattice. Physical Review D, 1994, 50, 2297-2308.	4.7	56
22	Abelian sandpiles. Computers in Physics, 1991, 5, 198.	0.5	54
23	Low temperature expansion for the Ising model. Physical Review Letters, 1992, 69, 1841-1844.	7.8	52
24	Quark bags and local field theory. II. Confinement of Fermi and vector fields. Physical Review D, 1975, 12, 443-447.	4.7	51
25	Spontaneous Violation ofCPSymmetry in the Strong Interactions. Physical Review Letters, 2004, 92, 201601.	7.8	49
26	Monte Carlo study of renormalization in lattice gauge theory. Physical Review D, 1981, 23, 1815-1823.	4.7	45
27	Gauge fixing and canonical quantization. Physical Review D, 1979, 19, 531-539.	4.7	44
28	Phase diagrams for coupled spin-gauge systems. Physical Review D, 1980, 21, 1006-1012.	4.7	44
29	Numerical studies of Wilson loops in SU(3) gauge theory in four dimensions. Physical Review D, 1982, 26, 2166-2168.	4.7	43
30	Quantum mechanics of extended objects in relativistic field theory. Physical Review D, 1975, 12, 3126-3144.	4.7	41
31	Ambiguities in the Up-Quark Mass. Physical Review Letters, 2004, 92, 162003.	7.8	38
32	State counting and low-temperature series. Physical Review B, 1991, 43, 10659-10662.	3.2	34
33	Ising gauge theory at negative temperatures and spin-glasses. Physical Review B, 1980, 22, 3370-3373.	3.2	32
34	Feynman rules for lattice gauge theory. Reviews of Modern Physics, 1978, 50, 561-571.	45.6	29
35	Microcanonical cluster Monte Carlo simulation. Physical Review Letters, 1992, 69, 1002-1005.	7.8	29
36	Quantum electrodynamics in the temporal gauge. Annals of Physics, 1979, 117, 471-483.	2.8	27

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37	Monte-Carlo simulation of pure U(N) and SU(N) lattice gauge theories with fundamental and adjoint couplings. Computer Physics Communications, 1983, 29, 97-108.	7.5	24
38	Index theorem and overlap formalism with naive and minimally doubled fermions. Journal of High Energy Physics, 2010, 2010, 1.	4.7	24
39	Higgs mechanism and quark confinement. Physical Review D, 1974, 10, 2696-2699.	4.7	21
40	Low-temperature expansions for Potts models. Physical Review B, 1993, 48, 6183-6191.	3.2	21
41	Specific-heat exponent for the three-dimensional Ising model from a 24th-order high-temperature series. Physical Review B, 1994, 49, 12909-12914.	3.2	20
42	Monte Carlo study of SU(3) gauge theory on a124lattice. Physical Review D, 1984, 29, 1207-1212.	4.7	19
43	One flavor QCD. Annals of Physics, 2007, 322, 1518-1540.	2.8	19
44	Phase transition in SU(6) lattice gauge theory. Physical Review D, 1982, 25, 1724-1726.	4.7	16
45	Species doubling and transfer matrices for fermionic fields. Physical Review D, 1987, 35, 1460-1467.	4.7	16
46	Transfer Matrices and Lattice Fermions at Finite Density. Foundations of Physics, 2000, 30, 487-492.	1.3	16
47	Regge-Cut Discontinuities and Elastic Unitarity. Physical Review Letters, 1973, 30, 343-345.	7.8	15
48	The â€™t Hooft vertex revisited. Annals of Physics, 2008, 323, 2349-2365.	2.8	15
49	Gell-Mann-Low equation and on-mass-shell amplitudes. Physical Review D, 1974, 10, 3749-3753.	4.7	14
50	Topological tunneling and Goldstone gluons. Physical Review D, 1977, 16, 2978-2990.	4.7	14
51	A fast algorithm for investigations on the three-dimensional Ising model. Computer Physics Communications, 1984, 33, 361-366.	7.5	14
52	Series expansions without diagrams. Physical Review E, 1994, 49, 2445-2453.	2.1	12
53	Rigorous Bounds on Coupling Constants in Two-Dimensional Field Theories. Physical Review D, 1972, 6, 2763-2765.	4.7	11
54	Vectorization of the three-dimensional ISING model program on the CDC cyber 205. Computer Physics Communications, 1986, 42, 191-196.	7.5	11

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55	Evaluating Grassmann Integrals. Physical Review Letters, 1998, 81, 3555-3558.	7.8	11
56	Emergent spin. Annals of Physics, 2014, 342, 21-30.	2.8	10
57	Pion Masses in Two-Flavor QCD with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î·</mml:mi></mml:math>Condensation. Physical Review Letters, 2014, 112, 141603.	7.8	10
58	Computer investigations of the three-dimensional Ising model. Journal of Statistical Physics, 1986, 42, 823-832.	1.2	9
59	Modified Wilson action andZ2artifacts in SU(2) lattice gauge theory. Physical Review D, 1991, 44, 3918-3923.	4.7	9
60	FORTRAN code for the three-dimensional Ising model. Computer Physics Communications, 1986, 39, 173-180.	7.5	8
61	Counting world lines for many-fermion systems. Physical Review B, 1992, 45, 4650-4655.	3.2	8
62	Anomalies and chiral symmetry in QCD. Annals of Physics, 2009, 324, 1573-1584.	2.8	8
63	Dynamics of Sand. MRS Bulletin, 1991, 16, 17-21.	3.5	7
64	Anomalies, gauge field topology, and the lattice. Annals of Physics, 2011, 326, 911-925.	2.8	7
65	Quark masses, the Dashen phase, and gauge field topology. Annals of Physics, 2013, 339, 560-569.	2.8	7
66	Confinement and Lattice Gauge Theory. Physica Scripta, 1981, 23, 973-977.	2.5	6
67	Species Doubling and Chiral Lagrangians. Physical Review Letters, 1996, 76, 4671-4674.	7.8	6
68	Quark mass dependence of two-flavor QCD. Physical Review D, 2011, 83, .	4.7	6
69	Comment on "Are There Fixed Singularities inT1?". Physical Review D, 1973, 7, 1539-1540.	4.7	5
70	Phase transitions inU(N)lattice gauge theory in four dimensions. Physical Review D, 1982, 25, 610-613.	4.7	5
71	Quantum fluctuations and the bag model. Physical Review D, 1976, 13, 3432-3439.	4.7	4
72	Higgs mechanism in the temporal gauge. Physical Review D, 1978, 17, 2619-2623.	4.7	4

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73	Implementation of the microcanonical Monte Carlo simulation algorithm for SU(N) lattice gauge theory calculations. Computer Physics Communications, 1983, 30, 255-257.	7.5	4
74	Remarks on the Validity of the Cottingham Formula for Electromagnetic Mass Shifts. Physical Review D, 1971, 4, 2984-2988.	4.7	3
75	Equal-Time Commutators of the Electromagnetic Current and Its Time Derivatives. Physical Review D, 1972, 5, 1937-1945.	4.7	3
76	Biased Monte Carlo algorithms on unitary groups. Physical Review D, 1989, 39, 689-692.	4.7	3
77	Spontaneous CP violation and quark mass ambiguities. AIP Conference Proceedings, 2005, , .	0.4	3
78	YANGâ€“MILLS FIELDS AND THE LATTICE. , 2005, , 357-374.		3
79	Noncausal Dispersion Relations and a Fundamental Length. Physical Review D, 1970, 2, 2359-2362.	4.7	2
80	Positivity, Subtractions, and the Moduli of Scattering Amplitudes. Physical Review D, 1972, 6, 3533-3537.	4.7	2
81	Vanishing Longitudinal Cross Sections and Operator Schwinger Terms. Physical Review D, 1972, 5, 3269-3272.	4.7	2
82	DIRECT SIMULATIONS OF SMALL MULTI-FERMION SYSTEMS. International Journal of Modern Physics C, 2003, 14, 1027-1040.	1.7	2
83	Hidden symmetries in two dimensional field theory. Annals of Physics, 2006, 321, 2782-2792.	2.8	2
84	Pomeron cuts and inclusive reactions. Physical Review D, 1974, 9, 684-696.	4.7	1
85	SO(3) scale parameter. Physical Review D, 1984, 30, 2678-2682.	4.7	1
86	ALGORITHMS FOR SIMULATING FERMIONS. Advanced Series on Directions in High Energy Physics, 1992, , 275-303.	0.7	1
87	Lattice fields and extra dimensions. Computer Physics Communications, 2000, 127, 37-42.	7.5	1
88	Quark masses and strong CP violation. , 2011, , .		1
89	Way to Test Causality in theÏ•Meson System. Physical Review D, 1972, 5, 1139-1143.	4.7	0
90	Low-Energy Theorems and High-Energy Behavior. Physical Review D, 1972, 6, 2483-2487.	4.7	0

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91	Supercomputers and Quantum Field Theory. Progress of Theoretical Physics Supplement, 1985, 85, 237-243.	0.1	0
92	How Computational Physics is Uniting Science and Revolutionizing Society. Computers in Physics, 1995, 9, 247.	0.5	0
93	The invariant measure for SU(N). AIP Conference Proceedings, 2005, , .	0.4	0
94	The lattice and quantized Yangâ€“Mills theory. Modern Physics Letters A, 2015, 30, 1530027.	1.2	0
95	Four metrics. International Journal of Modern Physics D, 2020, 29, 2043005.	2.1	0
96	QCD beyond diagrams. International Journal of Modern Physics A, 2021, 36, 2130012.	1.5	0
97	TOPOLOGY AND THE OVERLAP. , 2003, , .		0
98	Supercomputers and Quantum Field Theory. Progress of Theoretical Physics Supplement, 2013, 85, 237-243.	0.1	0
99	The Lattice and Quantized Yangâ€“Mills Theory. , 2016, , .		0