David J Toms

List of Publications by Year
in descending order

46 papers	1,554 citations	361413 20 h-index	302126 39 g-index
46 all docs	46 docs citations	46 times ranked	384 citing authors

#	Article	IF	Citations
1	Symmetry breaking and mass generation by space-time topology. Physical Review D, 1980, 21, 2805-2817.	4.7	146
2	Renormalization-group analysis of grand unified theories in curved spacetime. Physical Review D, 1984, 29, 1584-1608.	4.7	142
3	Casimir effect and topological mass. Physical Review D, 1980, 21, 928-932.	4.7	116
4	Renormalization of interacting scalar field theories in curved space-time. Physical Review D, 1982, 26, 2713-2729.	4.7	105
5	New form for the coincidence limit of the Feynman propagator, or heat kernel, in curved spacetime. Physical Review D, 1985, 31, 953-956.	4.7	87
6	Explicit curvature dependence of coupling constants. Physical Review D, 1985, 31, 2424-2438.	4.7	72
7	Quantum gravitational contributions to quantum electrodynamics. Nature, 2010, 468, 56-59.	27.8	70
8	Dynamical symmetry breaking due to radiative corrections in cosmology. Physical Review D, 1982, 25, 1510-1518.	4.7	68
9	Background-field method and the renormalization of non-Abelian gauge theories in curved space-time. Physical Review D, 1983, 27, 1803-1813.	4.7	57
10	Cosmological Constant and Quantum Gravitational Corrections to the Running Fine Structure Constant. Physical Review Letters, 2008, 101, 131301.	7.8	56
11	Renormalization group and nonlocal terms in the curved-spacetime effective action: Weak-field results. Physical Review D, 1985, 32, 1409-1420.	4.7	55
12	Unique effective action in five-dimensional Kaluza-Klein theory. Physical Review Letters, 1987, 58, 296-298.	7.8	54
13	Effective action at finite temperature. Physical Review D, 1992, 46, 1671-1679.	4.7	47
14	Bose-Einstein condensation in relativistic systems in curved space as symmetry breaking. Physical Review Letters, 1992, 69, 1152-1155.	7.8	43
15	Density of states for Bose-Einstein condensation in harmonic oscillator potentials. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 222, 148-151.	2.1	42
16	Bose-Einstein condensation as symmetry breaking in curved spacetime and in spacetimes with boundaries. Physical Review D, 1993, 47, 2483-2496.	4.7	38
17	Functional measure for quantum field theory in curved spacetime. Physical Review D, 1987, 35, 3796-3803.	4.7	30
18	Effective Couplings of Grand Unified Theories in Curved Space-Time. Physical Review Letters, 1984, 52, 1269-1271.	7.8	29

#	Article	IF	Citations
19	Scalar electrodynamics in a nonsimply connected space-time. Physics Letters, Section A: General, Atomic and Solid State Physics, 1980, 77, 303-306.	2.1	23
20	The conformal anomaly in higher dimensions. Classical and Quantum Gravity, 1986, 3, 431-442.	4.0	20
21	Bose-Einstein condensation in a general static homogeneous magnetic fieldinebreak and the effective action: The nonrelativistic ideal gas. Physical Review D, 1995, 51, 1886-1894.	4.7	19
22	Effective-action approach to Bose-Einstein condensation and superconductivity of a charged ideal nonrelativistic Bose gas. Physical Review B, 1994, 50, 3120-3128.	3.2	16
23	Vacuum stability and symmetry breaking in non-Minkowskian space-times. Physical Review D, 1982, 25, 2536-2547.	4.7	14
24	The canonical partition function for quons. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 195, 38-42.	2.1	13
25	Stability of self-consistent higher-dimensional cosmological solutions. Physical Review D, 1985, 32, 1921-1927.	4.7	12
26	No generalized statistics from dynamics in curved spacetime. Physical Review Letters, 1993, 71, 3240-3242.	7.8	12
27	Renormalization of interacting scalar field theory in three-dimensional curved spacetime. Physical Review D, 1994, 49, 6767-6777.	4.7	12
28	Field-parametrization dependence of the effective action in scalar electrodynamics. Physical Review D, 1989, 39, 1735-1742.	4.7	11
29	Geometrical interpretation of the functional measure for supersymmetric gauge theories and of the gauge invariant effective action. Annals of Physics, 1991, 205, 70-109.	2.8	11
30	Bose-Einstein condensation for interacting scalar fields in curved spacetime. Physical Review D, 1995, 51, 6886-6900.	4.7	11
31	Vacuum structure of Yang-Millsâ€“Chern-Simons theory in three dimensions. Physical Review Letters, 1990, 64, 1639-1642.	7.8	10
32	Gauge-independent effective potential for minimally coupled quantum fields in curved space. Physical Review D, 1992, 46, 4413-4420.	4.7	10
33	Bose-Einstein condensation of a charged relativistic ideal gas in a general homogeneous magnetic field. Physical Review D, 1994, 50, 6457-6468.	4.7	10
34	Boseâ€“Einstein condensation in the three-sphere and in the infinite slab: Analytical results. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 3984-3996.	2.6	10
35	Effective action for the Yukawa model in curved spacetime. Journal of High Energy Physics, 2018, 2018, 1.	4.7	10
36	Boundary effects and the massless limit of the photon. Physical Review D, 1985, 31, 1363-1369.	4.7	9

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37	Ideal Fermi gases in harmonic oscillator potential traps. Annals of Physics, 2005, 320, 487-520.	2.8	9
38	Grassmannian Kaluza-Klein theory. Classical and Quantum Gravity, 1989, 6, 1033-1040.	4.0	8
39	Gauge vacua in Yang-Mills-Chern-Simons theory on tori and projective spaces. Physical Review D, 1991, 43, 1956-1964.	4.7	8
40	Is there a phase transition in Maxwell-Chern-Simons theory?. Physical Review D, 1993, 48, 1808-1820.	4.7	8
41	The specific heat of a trapped Fermi gas: an analytical approach. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 267, 276-280.	2.1	6
42	Invariants of the heat equation for non-minimal operators. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 215401.	2.1	6
43	Vacuum energy for massive forms in R M *S N. Classical and Quantum Gravity, 1987, 4, 1357-1367.	4.0	5
44	Symmetry breaking around cosmic strings. Classical and Quantum Gravity, 1989, 6, 1343-1349.	4.0	5
45	Two-loop instabilities of gauge vacua and topological symmetry breaking on Rn Ã— S1. Annals of Physics, 1991, 210, 438-463.	2.8	5
46	Weak field superconductivity for relativistic charged gases at high temperature. Physical Review D, 1995, 51, 1895-1902.	4.7	4