

# Tomislav Prokopec

## List of Publications by Year in descending order

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115  
papers

4,860  
citations

81900

39  
h-index

98798

67  
g-index

115  
all docs

115  
docs citations

115  
times ranked

2566  
citing authors

#	ARTICLE	IF	CITATIONS
1	On primordial black holes from an inflection point. <i>Physics of the Dark Universe</i> , 2017, 18, 6-10.	4.9	242
2	Inflation and squeezed quantum states. <i>Physical Review D</i> , 1994, 50, 4807-4820.	4.7	238
3	Lattice study of classical inflaton decay. <i>Physical Review D</i> , 1997, 55, 3768-3775.	4.7	180
4	How fast can the wall move? A study of the electroweak phase transition dynamics. <i>Physical Review D</i> , 1995, 52, 7182-7204.	4.7	166
5	Stochastic inflationary scalar electrodynamics. <i>Annals of Physics</i> , 2008, 323, 1324-1360.	2.8	148
6	Nonlocal electroweak baryogenesis. I. Thin wall regime. <i>Physical Review D</i> , 1996, 53, 2930-2957.	4.7	142
7	Nonlocal electroweak baryogenesis. II. The classical regime. <i>Physical Review D</i> , 1996, 53, 2958-2980.	4.7	132
8	Transport equations for chiral fermions to order $\hat{\alpha}_s$ and electroweak baryogenesis: Part I. <i>Annals of Physics</i> , 2004, 314, 208-265.	2.8	126
9	Photon Mass from Inflation. <i>Physical Review Letters</i> , 2002, 89, 101301.	7.8	125
10	Bubble Wall Velocity in a First Order Electroweak Phase Transition. <i>Physical Review Letters</i> , 1995, 75, 777-780.	7.8	117
11	Turning around the sphaleron bound: Electroweak baryogenesis in an alternative post-inflationary cosmology. <i>Physical Review D</i> , 1998, 57, 6022-6049.	4.7	113
12	MSSM electroweak baryogenesis and flavour mixing in transport equations. <i>Nuclear Physics B</i> , 2006, 738, 1-22.	2.5	113
13	Electroweak phase transition and baryogenesis in the nMSSM. <i>Nuclear Physics B</i> , 2006, 757, 172-196.	2.5	109
14	Transport equations for chiral fermions to order $\hat{\alpha}_s$ and electroweak baryogenesis: Part II. <i>Annals of Physics</i> , 2004, 314, 267-320.	2.8	106
15	Primordial spectrum of gauge fields from inflation. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2001, 501, 165-172.	4.1	105
16	One loop vacuum polarization in a locally de Sitter background. <i>Annals of Physics</i> , 2003, 303, 251-274.	2.8	104
17	Electroweak Baryogenesis from a Classical Force. <i>Physical Review Letters</i> , 1995, 75, 1695-1698.	7.8	102
18	First principle derivation of semiclassical force for electroweak baryogenesis. <i>Journal of High Energy Physics</i> , 2001, 2001, 031-031.	4.7	83

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19	Entropy of a classical stochastic field and cosmological perturbations. <i>Physical Review Letters</i> , 1992, 69, 3606-3609.	7.8	82
20	Entropy of the gravitational field. <i>Physical Review D</i> , 1993, 48, 2443-2455.	4.7	81
21	Natural magnetogenesis from inflation. <i>Physical Review D</i> , 2002, 65, .	4.7	81
22	Production of massless fermions during inflation. <i>Journal of High Energy Physics</i> , 2003, 2003, 059-059.	4.7	80
23	Kinetic description of fermion flavor mixing and CP-violating sources for baryogenesis. <i>Nuclear Physics B</i> , 2005, 716, 373-400.	2.5	70
24	Two loop scalar bilinears for inflationary SQED. <i>Classical and Quantum Gravity</i> , 2007, 24, 201-230.	4.0	68
25	Dynamics of superhorizon photons during inflation with vacuum polarization. <i>Annals of Physics</i> , 2004, 312, 1-16.	2.8	65
26	Vacuum polarization and photon mass in inflation. <i>American Journal of Physics</i> , 2004, 72, 60-72.	0.7	65
27	Infrared propagator corrections for constant deceleration. <i>Classical and Quantum Gravity</i> , 2008, 25, 245013.	4.0	64
28	Fermion mass generation in de Sitter space. <i>Physical Review D</i> , 2006, 73, .	4.7	61
29	Photon mass generation during inflation: de Sitter invariant case. <i>Journal of Cosmology and Astroparticle Physics</i> , 2004, 2004, 007-007.	5.4	58
30	Semiclassical force for electroweak baryogenesis: Three-dimensional derivation. <i>Physical Review D</i> , 2002, 66, .	4.7	56
31	Two loop stress-energy tensor for inflationary scalar electrodynamics. <i>Physical Review D</i> , 2008, 78, .	4.7	54
32	Gravitational waves from conformal symmetry breaking. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 009-009.	5.4	53
33	Efficient electroweak baryogenesis from lepton transport. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1994, 338, 269-275.	4.1	50
34	Axial currents from CKM matrix CP violation and electroweak baryogenesis. <i>Nuclear Physics B</i> , 2004, 679, 246-260.	2.5	48
35	Quantum radiative corrections to slow-roll inflation. <i>Physical Review D</i> , 2007, 76, .	4.7	48
36	Failure of the stochastic approach to inflation beyond slow-roll. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 048-048.	5.4	48

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37	Entropy of the squeezed vacuum. <i>Classical and Quantum Gravity</i> , 1993, 10, 2295-2306.	4.0	44
38	Nearly minimal magnetogenesis. <i>Physical Review D</i> , 2004, 70, .	4.7	39
39	Inflation in an effective gravitational model and asymptotic safety. <i>Physical Review D</i> , 2018, 98, .	4.7	39
40	Field-theoretic derivation of bubble-wall force. <i>Journal of High Energy Physics</i> , 2021, 2021, 1.	4.7	39
41	Electroweak Baryogenesis from a Classical Force. <i>Physical Review Letters</i> , 1995, 75, 3375-3375.	7.8	34
42	Backreaction of a massless minimally coupled scalar field from inflationary quantum fluctuations. <i>Physical Review D</i> , 2014, 89, .	4.7	34
43	Particle number in kinetic theory. <i>European Physical Journal C</i> , 2004, 38, 135-143.	3.9	33
44	Gauge invariant cosmological perturbations for the nonminimally coupled inflaton field. <i>Physical Review D</i> , 2010, 82, .	4.7	33
45	Decoherence from isocurvature perturbations in inflation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2007, 2007, 029-029.	5.4	32
46	Uniqueness of the gauge invariant action for cosmological perturbations. <i>Journal of Cosmology and Astroparticle Physics</i> , 2012, 2012, 031-031.	5.4	32
47	Frame independent cosmological perturbations. <i>Journal of Cosmology and Astroparticle Physics</i> , 2013, 2013, 027-027.	5.4	32
48	Electrodynamic effects of inflationary gravitons. <i>Classical and Quantum Gravity</i> , 2014, 31, 175002.	4.0	32
49	Decoherence in an interacting quantum field theory: The vacuum case. <i>Physical Review D</i> , 2010, 81, .	4.7	31
50	The fermion propagator in cosmological spaces with constant deceleration. <i>Classical and Quantum Gravity</i> , 2009, 26, 125003.	4.0	29
51	Path integral for inflationary perturbations. <i>Physical Review D</i> , 2010, 82, .	4.7	28
52	Baryogenesis in the MSSM, nMSSM and NMSSM. <i>Nuclear Physics A</i> , 2007, 785, 206-209.	1.5	27
53	Quantum scalar corrections to the gravitational potentials on de Sitter background. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.7	27
54	The Hubble effective potential. <i>Journal of Cosmology and Astroparticle Physics</i> , 2009, 2009, 003-003.	5.4	26

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55	Single-scale renormalisation group improvement of multi-scale effective potentials. Journal of High Energy Physics, 2018, 2018, 1.	4.7	26
56	Graviton loop corrections to vacuum polarization in de Sitter in a general covariant gauge. Classical and Quantum Gravity, 2015, 32, 195014.	4.0	25
57	Stochastic dark energy from inflationary quantum fluctuations. European Physical Journal C, 2018, 78, 1.	3.9	23
58	Late-time quantum backreaction from inflationary fluctuations of a nonminimally coupled massless scalar. Physical Review D, 2015, 91, .	4.7	22
59	Inflation as a spontaneous symmetry breaking of Weyl symmetry. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 022-022.	5.4	21
60	Coherent Baryogenesis. Physical Review Letters, 2004, 92, 061303.	7.8	20
61	Quantum backreaction in evolving FLRW spacetimes. Physical Review D, 2011, 83, .	4.7	20
62	Deducing cosmological observables from the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mi} \rangle S \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ matrix. Physical Review D, 2017, 96, .	4.7	19
63	Late-time quantum backreaction of a very light nonminimally coupled scalar. Physical Review D, 2016, 94, .	4.7	19
64	SO(10)-GUT coherent baryogenesis. Nuclear Physics B, 2006, 736, 133-155.	2.5	18
65	Decoherence in an interacting quantum field theory: Thermal case. Physical Review D, 2011, 83, .	4.7	18
66	Symmetry breaking and Goldstone theorem in de Sitter space. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 023-023.	5.4	18
67	Covariant vacuum polarizations on de Sitter background. Physical Review D, 2013, 87, .	4.7	18
68	A graviton propagator for inflation. Classical and Quantum Gravity, 2008, 25, 055007.	4.0	17
69	Entropy and correlators in quantum field theory. Annals of Physics, 2010, 325, 1277-1303.	2.8	17
70	Gravitational microlensing in Verlinde's emergent gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 769, 281-288.	4.1	17
71	Systematic analysis of radiative symmetry breaking in models with extended scalar sector. Journal of High Energy Physics, 2018, 2018, 1.	4.7	17
72	Representing the vacuum polarization on de Sitter. Journal of Mathematical Physics, 2013, 54, .	1.1	16

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73	One loop graviton corrections to dynamical photons in de Sitter. <i>Classical and Quantum Gravity</i> , 2017, 34, 085002.	4.0	16
74	Regulating the infrared by mode matching: A massless scalar in expanding spaces with constant deceleration. <i>Physical Review D</i> , 2011, 83, .	4.7	15
75	The graviton one-loop effective action in cosmological space-times with constant deceleration. <i>Annals of Physics</i> , 2010, 325, 948-968.	2.8	14
76	Time transients in the quantum corrected Newtonian potential induced by a massless nonminimally coupled scalar field. <i>Physical Review D</i> , 2011, 83, .	4.7	14
77	The role of conformal symmetry in gravity and the standard model. <i>Classical and Quantum Gravity</i> , 2016, 33, 245002.	4.0	14
78	Large logarithms from quantum gravitational corrections to a massless, minimally coupled scalar on de Sitter. <i>Journal of High Energy Physics</i> , 2022, 2022, 1.	4.7	14
79	Effect of the trace anomaly on the cosmological constant. <i>Physical Review D</i> , 2008, 78, .	4.7	13
80	Resolving Curvature Singularities in Holomorphic Gravity. <i>Foundations of Physics</i> , 2011, 41, 1597-1633.	1.3	12
81	Late time solution for interacting scalar in accelerating spaces. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 016-016.	5.4	12
82	Scalar enhancement of the photon electric field by the tail of the graviton propagator. <i>Physical Review D</i> , 2018, 98, .	4.7	12
83	Decoherence in quantum mechanics. <i>Annals of Physics</i> , 2011, 326, 1548-1576.	2.8	11
84	Scalar cosmological perturbations from inflationary black holes. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 050-050.	5.4	11
85	Scalar field dark matter in hybrid approach. <i>Physical Review D</i> , 2017, 96, .	4.7	11
86	Conformal symmetry and the cosmological constant problem. <i>International Journal of Modern Physics D</i> , 2018, 27, 1847014.	2.1	11
87	Antiscreening in perturbative quantum gravity and resolving the Newtonian singularity. <i>Physical Review D</i> , 2013, 87, .	4.7	10
88	Representing the graviton self-energy on de Sitter background. <i>Physical Review D</i> , 2014, 90, .	4.7	9
89	Inflation from cosmological constant and nonminimally coupled scalar. <i>Physical Review D</i> , 2015, 92, .	4.7	9
90	Single graviton loop contribution to the self-mass of a massless, conformally coupled scalar on a de Sitter background. <i>Physical Review D</i> , 2020, 101, .	4.7	9

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91	Baryogenesis from 'electrogenesis' in a scalar field dominated epoch. Journal of High Energy Physics, 2000, 2000, 030-030.	4.7	8
92	Vacuum properties of non-symmetric gravity in de Sitter space. Journal of Cosmology and Astroparticle Physics, 2007, 2007, 010-010.	5.4	8
93	Kinetic theory and classical limit for real scalar quantum field in curved spacetime. Physical Review D, 2018, 98, .	4.7	8
94	$\hat{I}^N$ and the stochastic conveyor belt of ultra slow-roll inflation. Physical Review D, 2021, 104, .	4.7	8
95	Graviton propagator in a 2-parameter family of de Sitter breaking gauges. Journal of High Energy Physics, 2019, 2019, 1.	4.7	8
96	The semiclassical propagator in field theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 468, 128-133.	4.1	7
97	Exact solution of the Dirac equation with CP violation. Physical Review D, 2013, 87, .	4.7	7
98	Entropy production in inflation from spectator loops. Physical Review D, 2019, 100, .	4.7	7
99	Non-minimally coupled curvaton. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 033.	5.4	7
100	Quantum origin of dark energy and the Hubble tension. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 831, 137174.	4.1	7
101	Decoherence and dynamical entropy generation in quantum field theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 707, 315-318.	4.1	6
102	Breaking of scaling symmetry by massless scalar on de Sitter. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134944.	4.1	5
103	Field-theoretic approach to large-scale structure formation. Physical Review D, 2019, 100, .	4.7	5
104	The Gaussian entropy of fermionic systems. Annals of Physics, 2012, 327, 3138-3169.	2.8	4
105	Global monopoles can change Universe's topology. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 756, 268-272.	4.1	4
106	Abelian Higgs model in power-law inflation: the propagators in the unitary gauge. Journal of High Energy Physics, 2020, 2020, 1.	4.7	4
107	Topological inflation with graceful exit. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 052-052.	5.4	3
108	Singularities in FLRW spacetimes. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 775, 311-314.	4.1	3

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109	One-loop graviton corrections to conformal scalars on a de Sitter background. Physical Review D, 2021, 103, .	4.7	3
110	Baryogenesis from the amplification of vacuum fluctuations during inflation. Physical Review D, 2008, 78, .	4.7	2
111	Planck scale operators, inflation, and fine tuning. Physical Review D, 2017, 96, .	4.7	2
112	The newtonian limit of hermitian gravity. General Relativity and Gravitation, 2013, 45, 155-187.	2.0	1
113	Aims and Scopes of the Special Issue: Foundations of Astrophysics and Cosmology. Foundations of Physics, 2017, 47, 709-710.	1.3	1
114	Singularities and conjugate points in FLRW spacetimes. General Relativity and Gravitation, 2017, 49, 1.	2.0	0
115	PHOTON MASS IN INFLATION AND NEARLY MINIMAL MAGNETOGENESIS. , 2005, , .		0