Gianluca Calcagni

List of Publications by Year
in descending order

129	4,610	87888 38	114465 63
papers	citations	h-index	g-index

142	142	142	1929
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cosmology of the Lifshitz universe. Journal of High Energy Physics, 2009, 2009, 112-112.	4.7	267
2	Fractal Universe and Quantum Gravity. Physical Review Letters, 2010, 104, 251301.	7.8	213
3	Prospects for fundamental physics with LISA. General Relativity and Gravitation, 2020, 52, 1.	2.0	198
4	Dark energy and cosmological solutions in second-order string gravity. Classical and Quantum Gravity, 2005, 22, 3977-4006.	4.0	150
5	Testing modified gravity at cosmological distances with LISA standard sirens. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 024-024.	5.4	129
6	Quantum field theory, gravity and cosmology in a fractal universe. Journal of High Energy Physics, 2010, 2010, 1.	4.7	122
7	Ghost conditions for Gaussâ€“Bonnet cosmologies. Nuclear Physics B, 2006, 752, 404-438.	2.5	103
8	Localization of nonlocal theories. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 662, 285-289.	4.1	101
9	Geometry and field theory in multi-fractional spacetime. Journal of High Energy Physics, 2012, 2012, 1.	4.7	98
10	Observational Constraints on Loop Quantum Cosmology. Physical Review Letters, 2011, 107, 211302.	7.8	96
11	Geometry of fractional spaces. Advances in Theoretical and Mathematical Physics, 2012, 16, 549-644.	0.6	96
12	Introduction to Loop Quantum Cosmology. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2012, , .	0.5	89
13	Anomaly-free cosmological perturbations in effective canonical quantum gravity. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 051-051.	5.4	82
14	New horizons for fundamental physics with LISA. Living Reviews in Relativity, 2022, 25, .	26.7	82
15	Slow-roll parameters in braneworld cosmologies. Physical Review D, 2004, 69, .	4.7	78
16	Route to nonlocal cosmology. Physical Review D, 2007, 76, .	4.7	77
17	Tachyon dark energy models: Dynamics and constraints. Physical Review D, 2006, 74, .	4.7	75
18	Barbero-Immirzi field in canonical formalism of pure gravity. Physical Review D, 2009, 79, .	4.7	75

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19	Probing the quantum nature of spacetime by diffusion. Physical Review D, 2013, 87, .	4.7	72
20	Nonlocal gravity and the diffusion equation. Physical Review D, 2010, 82, .	4.7	67
21	Observational test of inflation in loop quantum cosmology. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 046-046.	5.4	67
22	Detailed balance in HoÅ™ava-Lifshitz gravity. Physical Review D, 2010, 81, .	4.7	64
23	Observational constraints on patch inflation in noncommutative spacetime. Physical Review D, 2004, 70, .	4.7	63
24	Cosmological tachyon from cubic string field theory. Journal of High Energy Physics, 2006, 2006, 012-012.	4.7	63
25	Nonlocal quantum gravity and M-theory. Physical Review D, 2015, 91, .	4.7	60
26	Multi-scale gravity and cosmology. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 041-041.	5.4	58
27	Gravity on a multifractal. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 697, 251-253.	4.1	53
28	Super-accelerating bouncing cosmology in asymptotically free non-local gravity. European Physical Journal C, 2014, 74, 1.	3.9	52
29	Classical and Quantum Cosmology. Graduate Texts in Physics, 2017, , .	0.2	52
30	de Sitter thermodynamics and the braneworld. Journal of High Energy Physics, 2005, 2005, 060-060.	4.7	47
31	Diffusion in multiscale spacetimes. Physical Review E, 2013, 87, 012123.	2.1	46
32	Dimensional flow in discrete quantum geometries. Physical Review D, 2015, 91, .	4.7	46
33	Inflationary observables in loop quantum cosmology. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 032-032.	5.4	44
34	Nonlocality in string theory. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 355402.	2.1	44
35	Multifractional theories: an unconventional review. Journal of High Energy Physics, 2017, 2017, 1.	4.7	44
36	Quantum gravity and gravitational-wave astronomy. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 012-012.	5.4	44

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37	Noncommutative models in patch cosmology. Physical Review D, 2004, 70, .	4.7	40
38	Patch dualities and remarks on nonstandard cosmologies. Physical Review D, 2005, 71, .	4.7	39
39	Quantum mechanics in fractional and other anomalous spacetimes. Journal of Mathematical Physics, 2012, 53, .	1.1	39
40	Observational effects from quantum cosmology. Annalen Der Physik, 2013, 525, 323-338.	2.4	37
41	Cosmological Bardeen-Cooper-Schrieffer condensate as dark energy. Physical Review D, 2010, 81, .	4.7	36
42	Fractional and noncommutative spacetimes. Physical Review D, 2011, 84, .	4.7	36
43	Group field cosmology: a cosmological field theory of quantum geometry. Classical and Quantum Gravity, 2012, 29, 105005.	4.0	35
44	Spectral dimension of quantum geometries. Classical and Quantum Gravity, 2014, 31, 135014.	4.0	34
45	Loop Quantum Cosmology and Tensor Perturbations in the Early Universe. Advanced Science Letters, 2009, 2, 184-193.	0.2	34
46	Nonlocal instantons and solitons in string models. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 669, 102-106.	4.1	33
47	Inflationary scalar spectrum in loop quantum cosmology. Classical and Quantum Gravity, 2007, 24, 829-853.	4.0	32
48	Strong Planck constraints on braneworld and non-commutative inflation. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 052-052.	5.4	32
49	What gravity waves are telling about quantum spacetime. Physical Review D, 2016, 93, .	4.7	32
50	Multiscale spacetimes from first principles. Physical Review D, 2017, 95, .	4.7	31
51	Initial conditions and degrees of freedom of non-local gravity. Journal of High Energy Physics, 2018, 2018, 1.	4.7	30
52	Discrete to continuum transition in multifractal spacetimes. Physical Review D, 2011, 84, .	4.7	29
53	Loop quantum cosmology from group field theory. Physical Review D, 2014, 90, .	4.7	29
54	COSMOLOGICAL ROLLING SOLUTIONS OF NONLOCAL THEORIES. International Journal of Modern Physics D, 2010, 19, 329-338.	2.1	28

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55	Diffusion in quantum geometry. Physical Review D, 2012, 86, .	4.7	28
56	Gravitational-wave luminosity distance in quantum gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 135000.	4.1	27
57	Tachyon solutions in boundary and open string field theory. Physical Review D, 2008, 78, .	4.7	25
58	Cosmic microwave background and inflation in multi-fractional spacetimes. Journal of Cosmology and Astroparticle Physics, 2016, 2016, 039-039.	5.4	25
59	Stability of Schwarzschild singularity in non-local gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 773, 596-600.	4.1	24
60	Consistency equations in Randallâ€“Sundrum cosmology: a test for braneworld inflation. Journal of Cosmology and Astroparticle Physics, 2003, 2003, 009-009.	5.4	23
61	Quantum Gravity as a Fermi Liquid. Foundations of Physics, 2008, 38, 1148-1184.	1.3	23
62	Kinks of open superstring field theory. Nuclear Physics B, 2009, 823, 234-253.	2.5	23
63	Black-hole entropy and minimal diffusion. Physical Review D, 2013, 88, .	4.7	23
64	Nonlinear stability in nonlocal gravity. Physical Review D, 2019, 99, .	4.7	23
65	Laplacians on discrete and quantum geometries. Classical and Quantum Gravity, 2013, 30, 125006.	4.0	22
66	Spectral dimension and diffusion in multiscale spacetimes. Physical Review D, 2013, 88, .	4.7	22
67	Momentum transforms and Laplacians in fractional spaces. Advances in Theoretical and Mathematical Physics, 2012, 16, 1315-1348.	0.6	22
68	Non-Gaussianity in braneworld and tachyon inflation. Journal of Cosmology and Astroparticle Physics, 2005, 2005, 009-009.	5.4	21
69	ABC of multi-fractal spacetimes and fractional sea turtles. European Physical Journal C, 2016, 76, 1.	3.9	21
70	Towards Multifractional Calculus. Frontiers in Physics, 2018, 6, .	2.1	20
71	Stability of multifield cosmological solutions. Physical Review D, 2008, 77, .	4.7	19
72	Imprint of quantum gravity in the dimension and fabric of spacetime. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 774, 630-634.	4.1	19

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73	Classical and quantum gravity with fractional operators. Classical and Quantum Gravity, 2021, 38, 165005.	4.0	19
74	Two-point functions in (loop) quantum cosmology. Classical and Quantum Gravity, 2011, 28, 125014.	4.0	18
75	MULTIFRACTIONAL SPACETIMES, ASYMPTOTIC SAFETY AND HOÅ˜AVAâ€“LIFSHITZ GRAVITY. International Journal of Modern Physics A, 2013, 28, 1350092.	1.5	18
76	Complex dimensions and their observability. Physical Review D, 2017, 96, .	4.7	18
77	Multifractional theories: An updated review. Modern Physics Letters A, 2021, 36, 2140006.	1.2	18
78	String theory as a diffusing system. Journal of High Energy Physics, 2010, 2010, 1.	4.7	17
79	Consistency relations and degeneracies in (non)commutative patch inflation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 606, 177-183.	4.1	16
80	Superconducting loop quantum gravity and the cosmological constant. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 672, 386-389.	4.1	16
81	Varying electric charge in multiscale spacetimes. Physical Review D, 2014, 89, .	4.7	16
82	Lorentz violations in multifractal spacetimes. European Physical Journal C, 2017, 77, 1.	3.9	16
83	QUANTUM FIELD THEORY WITH VARYING COUPLINGS. International Journal of Modern Physics A, 2014, 29, 1450012.	1.5	15
84	Dimensional flow and fuzziness in quantum gravity: Emergence of stochastic spacetime. Nuclear Physics B, 2017, 923, 144-167.	2.5	15
85	Dark energy in multifractional spacetimes. Physical Review D, 2020, 102, .	4.7	15
86	Quantum spectral dimension in quantum field theory. International Journal of Modern Physics D, 2016, 25, 1650058.	2.1	14
87	Non-perturbative spectrum of non-local gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 795, 391-397.	4.1	14
88	Introduction to multifractional spacetimes. , 2012, , .		13
89	Quantum scalar field theories with fractional operators. Classical and Quantum Gravity, 2021, 38, 165006.	4.0	13
90	Degeneracy of consistency equations in braneworld inflation. Journal of Cosmology and Astroparticle Physics, 2004, 2004, 002-002.	5.4	12

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91	Black-hole stability in non-local gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 783, 19-23.	4.1	12
92	Symmetries and propagator in multifractional scalar field theory. Physical Review D, 2013, 87, .	4.7	11
93	Quantum cosmological consistency condition for inflation. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 026-026.	5.4	11
94	Standard Model in multiscale theories and observational constraints. Physical Review D, 2016, 94, .	4.7	11
95	Deformed symmetries in noncommutative and multifractional spacetimes. Physical Review D, 2017, 95, .	4.7	11
96	Taming the Beast: Diffusion Method in Nonlocal Gravity. Universe, 2018, 4, 95.	2.5	9
97	Tree-level scattering amplitudes in nonlocal field theories. Journal of High Energy Physics, 2021, 2021, 1.	4.7	9
98	Particle-physics constraints on multifractal spacetimes. Physical Review D, 2016, 93, .	4.7	8
99	Flow equations in generalized braneworld scenarios. Physical Review D, 2005, 72, .	4.7	7
100	Black holes in multi-fractional and Lorentz-violating models. European Physical Journal C, 2017, 77, 335.	3.9	7
101	Relativistic particle in multiscale spacetimes. Physical Review D, 2013, 88, .	4.7	5
102	Finite entanglement entropy and spectral dimension in quantum gravity. European Physical Journal C, 2017, 77, 1.	3.9	5
103	The geometry of learning. Journal of Mathematical Psychology, 2018, 84, 74-88.	1.8	5
104	New Standard Model constraints on the scales and dimension of spacetime. Journal of High Energy Physics, 2018, 2018, 1.	4.7	5
105	Next Step in Gravity and Cosmology: Fundamental Theory or Data-Driven Models?. Frontiers in Astronomy and Space Sciences, 2020, 7, .	2.8	5
106	Publisherâ€™s Note: What gravity waves are telling about quantum spacetime [Phys. Rev. D93, 124065 (2016)]. Physical Review D, 2016, 94, .	4.7	3
107	Behavior Stability and Individual Differences in Pavlovian Extended Conditioning. Frontiers in Psychology, 2020, 11, 612.	2.1	3
108	Inflationary spectra and observations in loop quantum cosmology. Journal of Physics: Conference Series, 2012, 360, 012027.	0.4	2

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109	What can quantum cosmology say about the inflationary universe?. Journal of Physics: Conference Series, 2015, 626, 012003.	0.4	2
110	Entanglement entropy, scale-dependent dimensions and the origin of gravity. International Journal of Modern Physics D, 2017, 26, 1743030.	2.1	2
111	Multifractional spacetimes from the Standard Model to cosmology. International Journal of Geometric Methods in Modern Physics, 2019, 16, 1940004.	2.0	2
112	Quantum Gravity and Gravitational-Wave Astronomy. , 2021, , 1-27.		2
113	Initial conditions and degrees of freedom of non-local gravity. , 2018, 2018, 1.		1
114	Detecting quantum gravity in the sky. , 2017, , .		1
115	Publisherâ€™s Note: Particle-physics constraints on multifractal spacetimes [Phys. Rev. D93, 025005 (2016)]. Physical Review D, 2016, 94, .	4.7	0
116	Cosmology of Quantum Gravities. Graduate Texts in Physics, 2017, , 543-624.	0.2	0
117	Canonical Quantum Gravity. Graduate Texts in Physics, 2017, , 407-465.	0.2	0
118	Canonical Quantum Cosmology. Graduate Texts in Physics, 2017, , 467-542.	0.2	0
119	String Cosmology. Graduate Texts in Physics, 2017, , 701-821.	0.2	0
120	Cosmological Perturbations. Graduate Texts in Physics, 2017, , 63-90.	0.2	0
121	Cosmic Microwave Background. Graduate Texts in Physics, 2017, , 91-151.	0.2	0
122	String Theory. Graduate Texts in Physics, 2017, , 625-700.	0.2	0
123	Cosmological Constant Problem. Graduate Texts in Physics, 2017, , 301-388.	0.2	0
124	Beyond Rescorlaâ€“Wagner: the Ups and Downs of Learning. Computational Brain & Behavior, 2021, 4, 355-379.	1.7	0
125	Braneworld Cosmology Almost without Branes. NATO Science Series Series II, Mathematics, Physics and Chemistry, 2005, , 297-303.	0.1	0
126	Big-Bang Problem. Graduate Texts in Physics, 2017, , 261-300.	0.2	0

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127	Hot Big Bang Model. Graduate Texts in Physics, 2017, , 13-62.	0.2	0
128	The Problem of Quantum Gravity. Graduate Texts in Physics, 2017, , 389-406.	0.2	0
129	Quantum Gravity and Gravitational-Wave Astronomy. , 2022, , 1177-1203.		0