

Abhay Ashtekar

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7475895/publications.pdf>

Version: 2024-02-01

150
papers

19,772
citations

14655

66
h-index

10734

138
g-index

153
all docs

153
docs citations

153
times ranked

3292
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-expanding horizons: multipoles and the symmetry group. Journal of High Energy Physics, 2022, 2022, 1.	4.7	11
2	Charges and fluxes on (perturbed) non-expanding horizons. Journal of High Energy Physics, 2022, 2022, 1.	4.7	11
3	Space-like singularities of general relativity: A phantom menace?. General Relativity and Gravitation, 2022, 54, .	2.0	8
4	Inferring the gravitational wave memory for binary coalescence events. Physical Review D, 2021, 103, .	4.7	18
5	A short review of loop quantum gravity. Reports on Progress in Physics, 2021, 84, 042001.	20.1	76
6	Cosmic Tango Between the Very Small and the Very Large: Addressing CMB Anomalies Through Loop Quantum Cosmology. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	16
7	Gravitational Dynamics—A Novel Shift in the Hamiltonian Paradigm. Universe, 2021, 7, 13.	2.5	15
8	Testing gravitational waveform models using angular momentum. Physical Review D, 2021, 104, .	4.7	3
9	Compact binary coalescences: constraints on waveforms. General Relativity and Gravitation, 2020, 52, 1.	2.0	18
10	Alleviating the Tension in the Cosmic Microwave Background using Planck-Scale Physics. Physical Review Letters, 2020, 125, 051302.	7.8	35
11	Compact binary coalescences: The subtle issue of angular momentum. Physical Review D, 2020, 101, .	4.7	18
12	Emergence of classical behavior in the early Universe. Physical Review D, 2020, 102, .	4.7	15
13	Black Hole Evaporation: A Perspective from Loop Quantum Gravity. Universe, 2020, 6, 21.	2.5	40
14	Asymptotics with a positive cosmological constant. IV. The no-incoming radiation condition. Physical Review D, 2019, 100, .	4.7	17
15	Quantum extension of the Kruskal spacetime. Physical Review D, 2018, 98, .	4.7	129
16	Quantum Transfiguration of Kruskal Black Holes. Physical Review Letters, 2018, 121, 241301.	7.8	148
17	Null infinity, the BMS group and infrared issues. General Relativity and Gravitation, 2018, 50, 1.	2.0	77
18	Phenomenology with fluctuating quantum geometries in loop quantum cosmology. Classical and Quantum Gravity, 2017, 34, 074003.	4.0	26

#	ARTICLE	IF	CITATIONS
19	Initial conditions for cosmological perturbations. <i>Classical and Quantum Gravity</i> , 2017, 34, 035004.	4.0	32
20	Quantum gravity in the sky: interplay between fundamental theory and observations. <i>Classical and Quantum Gravity</i> , 2017, 34, 014002.	4.0	52
21	Implications of a positive cosmological constant for general relativity. <i>Reports on Progress in Physics</i> , 2017, 80, 102901.	20.1	31
22	On a basic conceptual confusion in gravitational radiation theory. <i>Classical and Quantum Gravity</i> , 2017, 34, 20LT01.	4.0	17
23	On the ambiguity in the notion of transverse traceless modes of gravitational waves. <i>General Relativity and Gravitation</i> , 2017, 49, 1.	2.0	28
24	Editorial: Golden Oldies criteria and procedures. <i>General Relativity and Gravitation</i> , 2017, 49, 1.	2.0	0
25	Symmetry reduced loop quantum gravity: A bird's eye view. <i>International Journal of Modern Physics D</i> , 2016, 25, 1642010.	2.1	8
26	Gravitational Waves from Isolated Systems: Surprising Consequences of a Positive Cosmological Constant. <i>Physical Review Letters</i> , 2016, 116, 051101.	7.8	51
27	Unitarity and ultraviolet regularity in cosmology. <i>Physical Review D</i> , 2015, 91, .	4.7	27
28	Asymptotics with a positive cosmological constant. II. Linear fields on de Sitter spacetime. <i>Physical Review D</i> , 2015, 92, .	4.7	69
29	Generalized effective description of loop quantum cosmology. <i>Physical Review D</i> , 2015, 92, .	4.7	36
30	Asymptotics with a positive cosmological constant. III. The quadrupole formula. <i>Physical Review D</i> , 2015, 92, .	4.7	55
31	Loop quantum cosmology: from pre-inflationary dynamics to observations. <i>Classical and Quantum Gravity</i> , 2015, 32, 234001.	4.0	73
32	Response to Bryan Roberts: A new perspective on T violation. <i>Studies in History and Philosophy of Science Part B - Studies in History and Philosophy of Modern Physics</i> , 2015, 52, 16-20.	1.4	3
33	Preferred instantaneous vacuum for linear scalar fields in cosmological space-times. <i>Physical Review D</i> , 2015, 91, .	4.7	46
34	Asymptotics with a positive cosmological constant: I. Basic framework. <i>Classical and Quantum Gravity</i> , 2015, 32, 025004.	4.0	107
35	Time in fundamental physics. <i>Studies in History and Philosophy of Science Part B - Studies in History and Philosophy of Modern Physics</i> , 2015, 52, 69-74.	1.4	4
36	Geometry and physics of null infinity. <i>Journal of Differential Geometry</i> , 2015, 20, 99-122.	1.0	29

#	ARTICLE	IF	CITATIONS
37	The last 50 years of general relativity and gravitation: from GR3 to GR20 Warsaw conferences. <i>General Relativity and Gravitation</i> , 2014, 46, 1.	2.0	5
38	Loop Quantum Gravity and the Planck Regime of Cosmology. , 2014, , 323-347.		3
39	Extension of the quantum theory of cosmological perturbations to the Planck era. <i>Physical Review D</i> , 2013, 87, .	4.7	158
40	The Astrophysical Multimessenger Observatory Network (AMON). <i>Astroparticle Physics</i> , 2013, 45, 56-70.	4.3	83
41	Introduction to Loop Quantum Gravity and Cosmology. <i>Lecture Notes in Physics</i> , 2013, , 31-56.	0.7	23
42	Dynamical black holes: Approach to the final state. <i>Physical Review D</i> , 2013, 88, .	4.7	18
43	The pre-inflationary dynamics of loop quantum cosmology: confronting quantum gravity with observations. <i>Classical and Quantum Gravity</i> , 2013, 30, 085014.	4.0	194
44	On the uniqueness of kinematics of loop quantum cosmology. <i>Classical and Quantum Gravity</i> , 2012, 29, 242001.	4.0	30
45	Some Recent Advances in Loop Quantum Cosmology. <i>Journal of Physics: Conference Series</i> , 2012, 360, 012001.	0.4	1
46	Quantum Gravity Extension of the Inflationary Scenario. <i>Physical Review Letters</i> , 2012, 109, 251301.	7.8	177
47	Positive cosmological constant in loop quantum cosmology. <i>Physical Review D</i> , 2012, 85, .	4.7	81
48	The Issue of the Beginning in Quantum Gravity. , 2012, , 347-363.		3
49	Surprises in the Evaporation of 2D Black Holes. <i>Physical Review Letters</i> , 2011, 106, 161303.	7.8	63
50	Evaporation of two-dimensional black holes. <i>Physical Review D</i> , 2011, 83, .	4.7	44
51	Loop quantum cosmology: a status report. <i>Classical and Quantum Gravity</i> , 2011, 28, 213001.	4.0	826
52	Probability of inflation in loop quantum cosmology. <i>General Relativity and Gravitation</i> , 2011, 43, 3619-3655.	2.0	120
53	Hamiltonian formulation of the Belinskii-Khalatnikov-Lifshitz conjecture. <i>Physical Review D</i> , 2011, 83, .	4.7	46
54	Loop quantum cosmology and slow roll inflation. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2010, 694, 108-112.	4.1	108

#	ARTICLE	IF	CITATIONS
55	Casting loop quantum cosmology in the spin foam paradigm. Classical and Quantum Gravity, 2010, 27, 135020.	4.0	75
56	Path integrals and the WKB approximation in loop quantum cosmology. Physical Review D, 2010, 82, .	4.7	56
57	Quantum Space-Times. , 2010, , 163-196.		1
58	Hamiltonian general relativity and the Belinskiiâ€“Khalatnikovâ€“Lifshitz conjecture. Classical and Quantum Gravity, 2009, 26, 052001.	4.0	25
59	Singularity resolution in loop quantum cosmology: A brief overview. Journal of Physics: Conference Series, 2009, 189, 012003.	0.4	64
60	Loop quantum cosmology: an overview. General Relativity and Gravitation, 2009, 41, 707-741.	2.0	171
61	Some surprising implications of background independence in canonical quantum gravity. General Relativity and Gravitation, 2009, 41, 1927-1943.	2.0	16
62	Loop quantum cosmology and spin foams. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 681, 347-352.	4.1	63
63	Loop quantum cosmology of Bianchi type II models. Physical Review D, 2009, 80, .	4.7	117
64	Loop quantum cosmology of Bianchi type I models. Physical Review D, 2009, 79, .	4.7	236
65	Quantum field theory on a cosmological, quantum space-time. Physical Review D, 2009, 79, .	4.7	99
66	Robustness of key features of loop quantum cosmology. Physical Review D, 2008, 77, .	4.7	341
67	Covariant entropy bound and loop quantum cosmology. Physical Review D, 2008, 78, .	4.7	33
68	Information is Not Lost in the Evaporation of 2D Black Holes. Physical Review Letters, 2008, 100, 211302.	7.8	95
69	LOOP QUANTUM GRAVITY: FOUR RECENT ADVANCES AND A DOZEN FREQUENTLY ASKED QUESTIONS. , 2008, , .		2
70	Loop quantum cosmology of $k=1$ FRW models. Physical Review D, 2007, 75, .	4.7	277
71	Black hole dynamics in general relativity. Pramana - Journal of Physics, 2007, 69, 77-92.	1.8	3
72	Quantum nature of the big bang: Improved dynamics. Physical Review D, 2006, 74, .	4.7	845

#	ARTICLE	IF	CITATIONS
73	Quantum Nature of the Big Bang. Physical Review Letters, 2006, 96, 141301.	7.8	576
74	Physics from geometry. Nature Physics, 2006, 2, 725-726.	16.7	10
75	Quantum nature of the big bang: An analytical and numerical investigation. Physical Review D, 2006, 73, .	4.7	475
76	Space and Time: From Antiquity to Einstein and Beyond. Resonance, 2006, 11, 4-19.	0.3	5
77	Quantum geometry and the Schwarzschild singularity. Classical and Quantum Gravity, 2006, 23, 391-411.	4.0	264
78	HOW BLACK HOLES GROW. , 2006, , .		0
79	The Winding Road to Quantum Gravity. , 2006, , 69-92.		0
80	Gravity and the quantum. New Journal of Physics, 2005, 7, 198-198.	2.9	92
81	Semiclassical states for constrained systems. Physical Review D, 2005, 72, .	4.7	40
82	Black hole evaporation: a paradigm. Classical and Quantum Gravity, 2005, 22, 3349-3362.	4.0	209
83	Quantum horizons and black-hole entropy: inclusion of distortion and rotation. Classical and Quantum Gravity, 2005, 22, L27-L34.	4.0	59
84	Some uniqueness results for dynamical horizons. Advances in Theoretical and Mathematical Physics, 2005, 9, 1-30.	0.6	121
85	Background independent quantum gravity: a status report. Classical and Quantum Gravity, 2004, 21, R53-R152.	4.0	1,342
86	Multipole moments of isolated horizons. Classical and Quantum Gravity, 2004, 21, 2549-2570.	4.0	125
87	Isolated and Dynamical Horizons and Their Applications. Living Reviews in Relativity, 2004, 7, 10.	26.7	554
88	Quantum gravity, shadow states and quantum mechanics. Classical and Quantum Gravity, 2003, 20, 1031-1061.	4.0	211
89	Dynamical horizons and their properties. Physical Review D, 2003, 68, .	4.7	279
90	Non-minimal couplings, quantum geometry and black-hole entropy. Classical and Quantum Gravity, 2003, 20, 4473-4484.	4.0	40

#	ARTICLE	IF	CITATIONS
91	Mathematical structure of loop quantum cosmology. <i>Advances in Theoretical and Mathematical Physics</i> , 2003, 7, 233-268.	0.6	576
92	QUANTUM GEOMETRY AND GRAVITY: RECENT ADVANCES. , 2002, , .		7
93	Geometry of generic isolated horizons. <i>Classical and Quantum Gravity</i> , 2002, 19, 1195-1225.	4.0	172
94	Dynamical Horizons: Energy, Angular Momentum, Fluxes, and Balance Laws. <i>Physical Review Letters</i> , 2002, 89, 261101.	7.8	229
95	Isolated horizons in $2 + 1$ gravity. <i>Advances in Theoretical and Mathematical Physics</i> , 2002, 6, 507-555.	0.6	57
96	Relation between polymer and Fock excitations. <i>Classical and Quantum Gravity</i> , 2001, 18, L117-L127.	4.0	60
97	Hairy black holes, horizon mass and solitons. <i>Classical and Quantum Gravity</i> , 2001, 18, 919-940.	4.0	52
98	Mechanics of rotating isolated horizons. <i>Physical Review D</i> , 2001, 64, .	4.7	192
99	Mechanics of isolated horizons. <i>Classical and Quantum Gravity</i> , 2000, 17, 253-298.	4.0	184
100	Asymptotically anti-de Sitter spacetimes: conserved quantities. <i>Classical and Quantum Gravity</i> , 2000, 17, L17-L30.	4.0	288
101	Laws governing isolated horizons: inclusion of dilaton couplings. <i>Classical and Quantum Gravity</i> , 2000, 17, 1317-1332.	4.0	39
102	Isolated horizons: Hamiltonian evolution and the first law. <i>Physical Review D</i> , 2000, 62, .	4.7	257
103	Generic Isolated Horizons and Their Applications. <i>Physical Review Letters</i> , 2000, 85, 3564-3567.	7.8	215
104	Quantum geometry of isolated horizons and black hole entropy. <i>Advances in Theoretical and Mathematical Physics</i> , 2000, 4, 1-94.	0.6	408
105	Isolated horizons: a generalization of black hole mechanics. <i>Classical and Quantum Gravity</i> , 1999, 16, L1-L7.	4.0	179
106	Geometrical Formulation of Quantum Mechanics. , 1999, , 23-65.		74
107	Quantum Geometry and Black Holes. , 1999, , 149-170.		12
108	Quantum theory of geometry: III. Non-commutativity of Riemannian structures. <i>Classical and Quantum Gravity</i> , 1998, 15, 2955-2972.	4.0	115

#	ARTICLE	IF	CITATIONS
109	Quantum theory of geometry: I. Area operators. Classical and Quantum Gravity, 1997, 14, A55-A81.	4.0	625
110	Asymptotic structure of symmetry-reduced general relativity. Physical Review D, 1997, 55, 669-686.	4.7	185
111	Quantum theory of geometry II: Volume operators. Advances in Theoretical and Mathematical Physics, 1997, 1, 388-429.	0.6	387
112	Coherent State Transforms for Spaces of Connections. Journal of Functional Analysis, 1996, 135, 519-551.	1.4	71
113	POLYMER GEOMETRY AT PLANCK SCALE AND QUANTUM EINSTEIN EQUATIONS. International Journal of Modern Physics D, 1996, 05, 629-648.	2.1	15
114	Large Quantum Gravity Effects: Unforeseen Limitations of the Classical Theory. Physical Review Letters, 1996, 77, 4864-4867.	7.8	82
115	Generalized Wick transform for gravity. Physical Review D, 1996, 53, R2865-R2869.	4.7	32
116	Quantization of diffeomorphism invariant theories of connections with local degrees of freedom. Journal of Mathematical Physics, 1995, 36, 6456-6493.	1.1	474
117	Differential geometry on the space of connections via graphs and projective limits. Journal of Geometry and Physics, 1995, 17, 191-230.	1.4	222
118	Projective techniques and functional integration for gauge theories. Journal of Mathematical Physics, 1995, 36, 2170-2191.	1.1	274
119	WEAK FIELD LIMIT OF GENERAL RELATIVITY IN TERMS OF NEW VARIABLES: A HAMILTONIAN FRAMEWORK. International Journal of Modern Physics D, 1994, 03, 675-693.	2.1	6
120	Striking property of the gravitational Hamiltonian. Physical Review D, 1994, 50, 4944-4956.	4.7	61
121	An algebraic extension of Dirac quantization: Examples. Journal of Mathematical Physics, 1994, 35, 6434-6470.	1.1	74
122	MINISUPERSPACES: OBSERVABLES AND QUANTIZATION. International Journal of Modern Physics D, 1993, 02, 15-50.	2.1	56
123	Weaving a classical metric with quantum threads. Physical Review Letters, 1992, 69, 237-240.	7.8	278
124	THE COVARIANT PHASE SPACE OF ASYMPTOTICALLY FLAT GRAVITATIONAL FIELDS. , 1991, , 417-450.		78
125	Gravitons and loops. Physical Review D, 1991, 44, 1740-1755.	4.7	68
126	Self-duality, quantum gravity, Wilson loops and all that. , 1990, , 369-390.		0

#	ARTICLE	IF	CITATIONS
127	New variables for gravity: Inclusion of matter. Physical Review D, 1989, 40, 2572-2587.	4.7	129
128	THE CP PROBLEM IN QUANTUM GRAVITY. International Journal of Modern Physics A, 1989, 04, 1493-1514.	1.5	117
129	Recent Developments in Quantum Gravity. Annals of the New York Academy of Sciences, 1989, 571, 16-26.	3.8	6
130	A new characterization of half-flat solutions to Einstein's equation. Communications in Mathematical Physics, 1988, 115, 631-648.	2.2	82
131	New Hamiltonian formulation of general relativity. Physical Review D, 1987, 36, 1587-1602.	4.7	805
132	New Variables for Classical and Quantum Gravity. Physical Review Letters, 1986, 57, 2244-2247.	7.8	1,144
133	A note on helicity and self-duality. Journal of Mathematical Physics, 1986, 27, 824-827.	1.1	17
134	Geometric quantization and constrained systems. Journal of Mathematical Physics, 1986, 27, 1319-1330.	1.1	22
135	Linkages and Hamiltonians at null infinity. Journal of Mathematical Physics, 1982, 23, 2410-2417.	1.1	25
136	On the canonical approach to quantum gravity. Physical Review D, 1982, 26, 3342-3353.	4.7	58
137	NUT 4-momenta are forever. Journal of Mathematical Physics, 1982, 23, 2168-2178.	1.1	38
138	A generalization of tensor calculus and its applications to physics. General Relativity and Gravitation, 1982, 14, 411-428.	2.0	18
139	On the symplectic structure of general relativity. Communications in Mathematical Physics, 1982, 86, 55-68.	2.2	42
140	On the existence of solutions to Einstein's equation with non-zero Bondi news. Communications in Mathematical Physics, 1981, 79, 581-599.	2.2	70
141	Asymptotic Quantization of the Gravitational Field. Physical Review Letters, 1981, 46, 573-576.	7.8	107
142	Radiative degrees of freedom of the gravitational field in exact general relativity. Journal of Mathematical Physics, 1981, 22, 2885-2895.	1.1	87
143	On the relation between classical and quantum observables. Communications in Mathematical Physics, 1980, 71, 59-64.	2.2	31
144	A geometrical approach to external potential problems in quantum field theory. General Relativity and Gravitation, 1980, 12, 205-223.	2.0	26

#	ARTICLE	IF	CITATIONS
145	A curiosity concerning the role of coherent states in quantum field theory. <i>Pramana - Journal of Physics</i> , 1980, 15, 107-115.	1.8	28
146	Null infinity and Killing fields. <i>Journal of Mathematical Physics</i> , 1980, 21, 862-867.	1.1	23
147	Energy-Momentum in General Relativity. <i>Physical Review Letters</i> , 1979, 43, 181-184.	7.8	60
148	On conserved quantities in general relativity. <i>Journal of Mathematical Physics</i> , 1979, 20, 793-800.	1.1	66
149	A unified treatment of null and spatial infinity in general relativity. I. Universal structure, asymptotic symmetries, and conserved quantities at spatial infinity. <i>Journal of Mathematical Physics</i> , 1978, 19, 1542-1566.	1.1	338
150	The Sagnac effect in general relativity. <i>Journal of Mathematical Physics</i> , 1975, 16, 341.	1.1	76