Niayesh Afshordi

List of Publications by Year
in descending order

91 papers	3,712 citations	117625 34 h-index	133252 59 g-index
92 all docs	92 docs citations	92 times ranked	2973 citing authors

#	Article	IF	Citations
1	Extended Limber approximation. Physical Review D, 2008, 78, .	4.7	295
2	Echoes from the abyss: Tentative evidence for Planck-scale structure at black hole horizons. Physical Review D, 2017, 96, .	4.7	217
3	Cross-correlation of the cosmic microwave background with the 2MASS galaxy survey: Signatures of dark energy, hot gas, and point sources. Physical Review D, 2004, 69, .	4.7	194
4	Causal field theory with an infinite speed of sound. Physical Review D, 2007, 75, .	4.7	187
5	Primordial non-Gaussianity, statistics of collapsed objects, and the integrated Sachs-Wolfe effect. Physical Review D, 2008, 78, .	4.7	164
6	Primordial Black Holes as Dark Matter: The Power Spectrum and Evaporation of Early Structures. Astrophysical Journal, 2003, 594, L71-L74.	4.5	158
7	THE CASE FOR A DIRECTIONAL DARK MATTER DETECTOR AND THE STATUS OF CURRENT EXPERIMENTAL EFFORTS. International Journal of Modern Physics A, 2010, 25, 1-51.	1.5	151
8	Instability of dark energy with mass-varying neutrinos. Physical Review D, 2005, 72, .	4.7	129
9	Integrated Sachs-Wolfe effect in cross-correlation: The observer's manual. Physical Review D, 2004, 70, .	4.7	106
10	Schwinger effect in 4D de Sitter space and constraints on magnetogenesis in the early universe. Journal of High Energy Physics, 2014, 2014, 1.	4.7	106
11	Cuscuton cosmology: Dark energy meets modified gravity. Physical Review D, 2007, 75, .	4.7	95
12	Cuscuton and low-energy limit of HoÅ™ava-Lifshitz gravity. Physical Review D, 2009, 80, .	4.7	92
13	New horizons for fundamental physics with LISA. Living Reviews in Relativity, 2022, 25, .	26.7	82
14	Bypass to Turbulence in Hydrodynamic Accretion: Lagrangian Analysis of Energy Growth. Astrophysical Journal, 2005, 629, 373-382.	4.5	80
15	Geometrically Thin Disk Accreting into a Black Hole. Astrophysical Journal, 2003, 592, 354-367.	4.5	75
16	Missing thermal energy of the intracluster medium. Monthly Notices of the Royal Astronomical Society, 2007, 378, 293-300.	4.4	65
17	Bypass to Turbulence in Hydrodynamic Accretion Disks: An Eigenvalue Approach. Astrophysical Journal, 2005, 629, 383-396.	4.5	62
18	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>H</mml:mi><mml:mn>0</mml:mn></mml:msub></mml:math> tension as a hint for a transition in gravitational theory. Physical Review D, 2019, 99, .	4.7	60

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19	Super-Hubble nonlinear perturbations during inflation. Physical Review D, 2001, 63, .	4.7	54
20	Echoes from quantum black holes. Physical Review D, 2020, 101, .	4.7	54
21	Do observations offer evidence for cosmological-scale extra dimensions?. Journal of Cosmology and Astroparticle Physics, 2009, 2009, 030-030.	5.4	52
22	Black hole echology: The observerâ€™s manual. Physical Review D, 2018, 97, .	4.7	50
23	Do large-scale inhomogeneities explain away dark energy?. Physical Review D, 2005, 72, .	4.7	48
24	Echoes from the abyss: a highly spinning black hole remnant for the binary neutron star merger GW170817. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 010-010.	5.4	47
25	Prospects for detecting dark matter halo substructure with pulsar timing. Physical Review D, 2011, 84, .	4.7	46
26	Echoes from braneworld black holes. Physical Review D, 2020, 101, .	4.7	45
27	From Planck Data to Planck Era: Observational Tests of Holographic Cosmology. Physical Review Letters, 2017, 118, 041301.	7.8	44
28	Probing microstructure of black hole spacetimes with gravitational wave echoes. Physical Review D, 2019, 99, .	4.7	43
29	First measurement of the bulk flow of nearby galaxies using the cosmic microwave background. Monthly Notices of the Royal Astronomical Society, 2013, 430, 1617-1635.	4.4	41
30	Massâ€Temperature Relation of Galaxy Clusters: A Theoretical Study. Astrophysical Journal, 2002, 564, 669-682.	4.5	41
31	On reflectivity of quantum black hole horizons. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 016-016.	5.4	39
32	A distinguished vacuum state for a quantum field in a curved spacetime: formalism, features, and cosmology. Journal of High Energy Physics, 2012, 2012, 1.	4.7	38
33	Quantum Black Holes in the Sky. Universe, 2020, 6, 43.	2.5	38
34	Wilkinson Microwave Anisotropy ProbeConstraints on the Intracluster Medium. Astrophysical Journal, 2005, 629, 1-14.	4.5	37
35	Dynamical emergence of universal horizons during the formation of black holes. Physical Review D, 2014, 89, .	4.7	32
36	Empty black holes, firewalls, and the origin of Bekensteinâ€“Hawking entropy. International Journal of Modern Physics D, 2014, 23, 1443007.	2.1	29

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37	Concentration, ellipsoidal collapse, and the densest dark matter haloes. Monthly Notices of the Royal Astronomical Society, 2016, 456, 3068-3078.	4.4	29
38	A theory of a spot. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 019-019.	5.4	28
39	Multimessenger cosmology: Correlating cosmic microwave background and stochastic gravitational wave background measurements. Physical Review D, 2021, 103, .	4.7	28
40	Stellar black holes and the origin of cosmic acceleration. Physical Review D, 2009, 80, .	4.7	25
41	A ground state for the causal diamond in 2 dimensions. Journal of High Energy Physics, 2012, 2012, 1.	4.7	25
42	Cosmological black holes from self-gravitating fields. Physical Review D, 2014, 89, .	4.7	23
43	Horndeski theory meets the McVittie solution: A scalar field theory for accretion onto cosmological black holes. Physical Review D, 2014, 90, .	4.7	23
44	Out of the white hole: a holographic origin for the Big Bang. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 005-005.	5.4	22
45	Coarse-grained back reaction in single scalar field driven inflation. Journal of Cosmology and Astroparticle Physics, 2005, 2005, 011-011.	5.4	20
46	Critical geometry of a thermal big bang. Physical Review D, 2016, 94, .	4.7	20
47	Hierarchy in the phase space and dark matter astronomy. Physical Review D, 2010, 81, .	4.7	18
48	How loud are echoes from exotic compact objects?. Physical Review D, 2021, 103, .	4.7	18
49	How well can (renormalized) perturbation theory predict dark matter clustering properties?. Physical Review D, 2007, 75, .	4.7	17
50	Quantum nature of black holes: fast scrambling versus echoes. Journal of High Energy Physics, 2020, 2020, 1.	4.7	17
51	Emergent spacetime in stochastically evolving dimensions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 739, 117-124.	4.1	16
52	Clustering in the phase space of dark matter haloes â€“ II. Stable clustering and dark matter annihilation. Monthly Notices of the Royal Astronomical Society, 2014, 441, 1329-1339.	4.4	16
53	Cosmological tests of Everpresent Î›. Classical and Quantum Gravity, 2018, 35, 194002.	4.0	16
54	Quantum black hole seismology. I. Echoes, ergospheres, and spectra. Physical Review D, 2020, 102, .	4.7	16

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55	Constraining holographic cosmology using Planck data. Physical Review D, 2017, 95, .	4.7	14
56	Amending the halo model to satisfy cosmological conservation laws. Physical Review D, 2020, 101, .	4.7	14
57	Hierarchical phase space structure of dark matter haloes: Tidal debris, caustics, and dark matter annihilation. Physical Review D, 2009, 79, .	4.7	13
58	Universal clustering of dark matter in phase space. Monthly Notices of the Royal Astronomical Society, 2016, 457, 986-992.	4.4	13
59	Phenomenology of gravitational aether as a solution to the old cosmological constant problem. Physical Review D, 2011, 84, .	4.7	12
60	Does the Planck Mass Run on the Cosmological-Horizon Scale?. Physical Review Letters, 2008, 100, 111101.	7.8	11
61	The effect of non-ionizing excitations on the diffusion of ion species and inter-track correlations in FLASH ultra-high dose rate radiotherapy. Physics in Medicine and Biology, 2022, 67, 105005.	3.0	11
62	Growth of hydrodynamic perturbations in accretion disks: Possible route to non-magnetic turbulence. Advances in Space Research, 2006, 38, 2877-2879.	2.6	10
63	Transient weak lensing by cosmological dark matter microhaloes. Physical Review D, 2014, 89, .	4.7	10
64	Cosmic censorship in Lorentz-violating theories of gravity. Physical Review D, 2016, 93, .	4.7	10
65	Searching for dark matter annihilation from individual halos: uncertainties, scatter and signal-to-noise ratios. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 019-019.	5.4	10
66	Fundamental Plane of Sunyaevâ€Želâ€™dovich Clusters. Astrophysical Journal, 2008, 686, 201-205.	4.5	8
67	Neutron stars and the cosmological constant problem. Physical Review D, 2011, 84, .	4.7	8
68	Removal and mixing of the coronal gas from satellites in galaxy groups: cooling the intragroup gas. Monthly Notices of the Royal Astronomical Society, 2012, 426, 3464-3476.	4.4	8
69	How does pressure gravitate? Cosmological constant problem confronts observational cosmology. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 049-049.	5.4	7
70	Thermal tachyacoustic cosmology. Physical Review D, 2014, 90, .	4.7	7
71	Dynamical friction in the primordial neutrino sea. Monthly Notices of the Royal Astronomical Society, 2017, 468, 2164-2175.	4.4	7
72	Cosmological bounds on TeV-scale physics and beyond. Physical Review D, 2016, 93, .	4.7	6

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73	Off-shell dark matter: A cosmological relic of quantum gravity. Physical Review D, 2017, 95, .	4.7	6
74	Echoes in the Kerr/CFT correspondence. Physical Review D, 2020, 102, .	4.7	6
75	Clustering in the phase space of dark matter haloes â€“ I. Results from the Aquarius simulations. Monthly Notices of the Royal Astronomical Society, 2014, 441, 1317-1328.	4.4	5
76	â€˜Firewallâ€™ phenomenology with astrophysical neutrinos. Classical and Quantum Gravity, 2016, 33, 235017.	4.0	5
77	Quantum black hole seismology. II. Applications to astrophysical black holes. Physical Review D, 2020, 102, .	4.7	5
78	How dark are filaments in the cosmic web?. Monthly Notices of the Royal Astronomical Society, 2020, 498, 3158-3170.	4.4	4
79	Extracting Hawking radiation near the horizon of AdS black holes. Journal of High Energy Physics, 2021, 2021, 1.	4.7	4
80	CMBB-mode polarization from Thomson scattering in the local universe. Physical Review D, 2005, 71, .	4.7	3
81	Gravitational potential from small-scale clustering in action space: application to Gaia Data Release 2. Monthly Notices of the Royal Astronomical Society, 2020, 493, 3061-3080.	4.4	3
82	Temperatures of renormalizable quantum field theories in curved spacetime. Classical and Quantum Gravity, 2018, 35, 225008.	4.0	2
83	Cosmological zero modes. Physical Review D, 2018, 98, .	4.7	2
84	Electromagnetic albedo of Quantum Black Holes. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
85	Spacing statistics of energy spectra: random matrices, black hole thermalization, and echoes. Journal of High Energy Physics, 2022, 2022, 1.	4.7	2
86	Non-Gaussian signatures of a thermal Big Bang. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 005.	5.4	2
87	An optimal and model-independent measurement of the intracluster pressure profile â€“ I. Methodology and first applications. Monthly Notices of the Royal Astronomical Society, 2013, 435, 1788-1808.	4.4	1
88	Accretion in Radiative Equipartition (AiRE) Disks. Astrophysical Journal, 2017, 843, 22.	4.5	1
89	Does history repeat itself? Periodic Time Cosmology. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 058-058.	5.4	1
90	Intracluster medium through three years of WMAP. New Astronomy Reviews, 2006, 50, 905-908.	12.8	0

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91	A Non-local Reality: Is There a Phase Uncertainty in Quantum Mechanics?. Foundations of Physics, 2015, 45, 1620-1644.	1.3	0