Francisco Antonio Villaescusa-Navarro

List of Publications by Year
in descending order

82 papers	4,098 citations	101543 36 h-index	118850 62 g-index
82 all docs	82 docs citations	82 times ranked	2367 citing authors

#	Article	IF	Citations
1	Beyond<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si33.gif" display="inline" overflow="scroll"><mml:mi>Î›</mml:mi><mml:mstyle mathvariant="normal"><mml:mi>CDM</mml:mi></mml:mstyle></mml:math>: Problems, solutions, and the road ahead. Physics of the Dark Universe, 2016, 12, 56-99.	4.9	361
2	Cosmology with Phase 1 of the Square Kilometre Array Red Book 2018: Technical specifications and performance forecasts. Publications of the Astronomical Society of Australia, 2020, 37, .	3.4	195
3	Fundamental physics with the Square Kilometre Array. Publications of the Astronomical Society of Australia, 2020, 37, .	3.4	179
4	Lensing is low: cosmology, galaxy formation or new physics?. Monthly Notices of the Royal Astronomical Society, 2017, 467, 3024-3047.	4.4	150
5	Cosmology with massive neutrinos II: on the universality of the halo mass function and bias. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 049-049.	5.4	149
6	The Quijote Simulations. Astrophysical Journal, Supplement Series, 2020, 250, 2.	7.7	149
7	Ingredients for 21 cm Intensity Mapping. Astrophysical Journal, 2018, 866, 135.	4.5	139
8	Cosmology with massive neutrinos I: towards a realistic modeling of the relation between matter, haloes and galaxies. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 011-011.	5.4	133
9	The CAMELS Project: Cosmology and Astrophysics with Machine-learning Simulations. Astrophysical Journal, 2021, 915, 71.	4.5	113
10	Cosmology with massive neutrinos III: the halo mass function and an application to galaxy clusters. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 012-012.	5.4	100
11	VIDE: The Void IDentification and Examination toolkit. Astronomy and Computing, 2015, 9, 1-9.	1.7	99
12	Constraining <i>M</i>_{Î½} with the bispectrum. Part I. Breaking parameter degeneracies. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 040-040.	5.4	95
13	Cosmic degeneracies â€“ I. Joint N-body simulations of modified gravity and massive neutrinos. Monthly Notices of the Royal Astronomical Society, 2014, 440, 75-88.	4.4	94
14	Voids in massive neutrino cosmologies. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 018-018.	5.4	94
15	Cosmology from a SKA HI intensity mapping survey. , 2015, , .		83
16	Fisher for complements: extracting cosmology and neutrino mass from the counts-in-cells PDF. Monthly Notices of the Royal Astronomical Society, 2020, 495, 4006-4027.	4.4	69
17	Initial conditions for accurate<i>N</i>-body simulations of massive neutrino cosmologies. Monthly Notices of the Royal Astronomical Society, 2017, 466, 3244-3258.	4.4	67
18	Atomic and molecular gas in IllustrisTNG galaxies at low redshift. Monthly Notices of the Royal Astronomical Society, 2019, 487, 1529-1550.	4.4	67

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19	Non-linear evolution of the cosmic neutrino background. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 019-019.	5.4	66
20	The Imprint of Neutrinos on Clustering in Redshift Space. Astrophysical Journal, 2018, 861, 53.	4.5	66
21	Constraining M _{Î½} with the bispectrum. Part II. The information content of the galaxy bispectrum monopole. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 029.	5.4	65
22	Modeling the neutral hydrogen distribution in the post-reionization Universe: intensity mapping. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 050-050.	5.4	64
23	Cores and cusps in warm dark matter halos. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 024-024.	5.4	62
24	WEIGHING NEUTRINOS WITH COSMIC NEUTRAL HYDROGEN. Astrophysical Journal, 2015, 814, 146.	4.5	60
25	On the spatial distribution of neutral hydrogen in the Universe: bias and shot-noise of the Hâ€‰i power spectrum. Monthly Notices of the Royal Astronomical Society, 2017, 471, 1788-1796.	4.4	57
26	The halo model in a massive neutrino cosmology. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 053-053.	5.4	53
27	High-redshift post-reionization cosmology with 21cm intensity mapping. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 004-004.	5.4	51
28	Using the Marked Power Spectrum to Detect the Signature of Neutrinos in Large-Scale Structure. Physical Review Letters, 2021, 126, 011301.	7.8	49
29	Baryonic acoustic oscillations from 21Âcm intensity mapping: the Square Kilometre Array case. Monthly Notices of the Royal Astronomical Society, 2017, 466, 2736-2751.	4.4	48
30	Warm dark matter signatures on the 21cm power spectrum: intensity mapping forecasts for SKA. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 047-047.	5.4	47
31	New interpretable statistics for large-scale structure analysis and generation. Physical Review D, 2020, 102, .	4.7	46
32	Reducing noise in cosmological N-body simulations with neutrinos. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 028-028.	5.4	42
33	Statistical Properties of Paired Fixed Fields. Astrophysical Journal, 2018, 867, 137.	4.5	42
34	Detecting Neutrino Mass by Combining Matter Clustering, Halos, and Voids. Astrophysical Journal, 2021, 919, 24.	4.5	40
35	Super-resolution emulator of cosmological simulations using deep physical models. Monthly Notices of the Royal Astronomical Society, 2020, 495, 4227-4236.	4.4	39
36	Neutral hydrogen in galaxy clusters: impact of AGN feedback and implications for intensity mapping. Monthly Notices of the Royal Astronomical Society, 2016, 456, 3553-3570.	4.4	38

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37	Biases from neutrino bias: to worry or not to worry?. Monthly Notices of the Royal Astronomical Society, 2019, 483, 734-743.	4.4	37
38	First Detection of Scale-Dependent Linear Halo Bias in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>N</mml:mi></mml:math> -Body Simulations with Massive Neutrinos. Physical Review Letters, 2019, 122, 041302.	7.8	31
39	Primordial non-Gaussianity without tails â€" how to measure fNL with the bulk of the density PDF. Monthly Notices of the Royal Astronomical Society, 2020, 498, 464-483.	4.4	31
40	A coarse grained perturbation theory for the Large Scale Structure, with cosmology and time independence in the UV. Journal of Cosmology and Astroparticle Physics, 2014, 2014, 047-047.	5.4	30
41	Baryonic effects on the matter bispectrum. Monthly Notices of the Royal Astronomical Society, 2020, 498, 2887-2911.	4.4	30
42	The CAMELS Multifield Data Set: Learning the Universeâ€™s Fundamental Parameters with Artificial Intelligence. Astrophysical Journal, Supplement Series, 2022, 259, 61.	7.7	30
43	deep21: a deep learning method for 21 cm foreground removal. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 081.	5.4	29
44	Neutrino halos in clusters of galaxies and their weak lensing signature. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 027-027.	5.4	27
45	Removing Astrophysics in 21 cm Maps with Neural Networks. Astrophysical Journal, 2021, 907, 44.	4.5	27
46	Cross-correlating 21cm intensity maps with Lyman Break Galaxies in the post-reionization era. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 034-034.	5.4	25
47	The effect of massive neutrinos on the BAO peak. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 001-001.	5.4	24
48	The cross-correlation between 21 cm intensity mapping maps and the LyÎ± forest in the post-reionization era. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 001-001.	5.4	24
49	The Hâ€‰i content of dark matter haloes at zÂâ‰ˆÂ0 from ALFALFA. Monthly Notices of the Royal Astronomical Society, 2019, 486, 5124-5138.	4.4	24
50	CARPool: fast, accurate computation of large-scale structure statistics by pairing costly and cheap cosmological simulations. Monthly Notices of the Royal Astronomical Society, 2021, 503, 1897-1914.	4.4	23
51	Neutrino signatures on the high-transmission regions of the Lyman $oldsymbol {alpha }$ forest. Monthly Notices of the Royal Astronomical Society, 2013, 431, 3670-3677.	4.4	21
52	Accurate initial conditions in mixed dark matterâ€"baryon simulations. Monthly Notices of the Royal Astronomical Society, 2017, 467, 4401-4409.	4.4	21
53	Primordial Non-Gaussianities and Zero-Bias Tracers of the Large-Scale Structure. Physical Review Letters, 2018, 121, 101301.	7.8	21
54	Weighing neutrinos with the halo environment. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 032-032.	5.4	21

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55	Finding Universal Relations in Subhalo Properties with Artificial Intelligence. Astrophysical Journal, 2022, 927, 85.	4.5	21
56	Effective halo model: Creating a physical and accurate model of the matter power spectrum and cluster counts. Physical Review D, 2020, 101, .	4.7	20
57	Baryon Acoustic Oscillations reconstruction with pixels. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 012-012.	5.4	19
58	Simulating cosmologies beyond Î›CDM with PINOCCHIO. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 008-008.	5.4	18
59	Cosmic degeneracies â€“ II. Structure formation in joint simulations of warm dark matter and f(R) gravity. Monthly Notices of the Royal Astronomical Society, 2018, 473, 3226-3240.	4.4	18
60	Signatures of photon and axion-like particle mixing in the gamma-ray burst jet. Journal of Cosmology and Astroparticle Physics, 2011, 2011, 030-030.	5.4	17
61	Information content of higher order galaxy correlation functions. Monthly Notices of the Royal Astronomical Society, 2021, 505, 628-641.	4.4	17
62	Searching for the Radiative Decay of the Cosmic Neutrino Background with Line-Intensity Mapping. Physical Review Letters, 2021, 127, 131102.	7.8	17
63	Cosmological Hydrodynamic Simulations with Suppressed Variance in the LyÎ± Forest Power Spectrum. Astrophysical Journal, 2019, 871, 144.	4.5	16
64	HInet: Generating Neutral Hydrogen from Dark Matter with Neural Networks. Astrophysical Journal, 2021, 916, 42.	4.5	16
65	The effects of massive neutrinos on the linear point of the correlation function. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 009-009.	5.4	16
66	Measuring the EoR Power Spectrum without Measuring the EoR Power Spectrum. Astrophysical Journal, 2019, 874, 133.	4.5	15
67	BE-HaPPY: bias emulator for halo power spectrum including massive neutrinos. Journal of Cosmology and Astroparticle Physics, 2019, 2019, 057-057.	5.4	15
68	Teaching Neural Networks to Generate Fast Sunyaevâ€“Zelâ€™dovich Maps. Astrophysical Journal, 2020, 902, 129.	4.5	14
69	NECOLA: Toward a Universal Field-level Cosmological Emulator. Astrophysical Journal, 2022, 930, 115.	4.5	13
70	The kinematic Sunyaevâ€“Zelâ€™dovich effect of the large-scale structureÂ(I): dependence on neutrino mass. Monthly Notices of the Royal Astronomical Society, 0, , stx170.	4.4	12
71	Breaking baryon-cosmology degeneracy with the electron density power spectrum. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 046.	5.4	11
72	The Circumgalactic Medium from the CAMELS Simulations: Forecasting Constraints on Feedback Processes from Future Sunyaevâ€“Zeldovich Observations. Astrophysical Journal, 2022, 933, 133.	4.5	11

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73	Extreme spheres: counts-in-cells for 21cm intensity mapping. Monthly Notices of the Royal Astronomical Society, 2019, 484, 269-281.	4.4	10
74	Cosmology with One Galaxy?. Astrophysical Journal, 2022, 929, 132.	4.5	10
75	Semi-analytic galaxy formation in massive neutrino cosmologies. Monthly Notices of the Royal Astronomical Society, 2015, 447, 3361-3367.	4.4	9
76	The kinematic Sunyaevâ€"Zelâ€™dovich effect of the large-scale structure (II): the effect of modified gravity. Monthly Notices of the Royal Astronomical Society, 2018, 481, 2497-2506.	4.4	9
77	Neural Networks as Optimal Estimators to Marginalize Over Baryonic Effects. Astrophysical Journal, 2022, 928, 44.	4.5	8
78	Constraining warm dark matter with high-z supernova lensing. Monthly Notices of the Royal Astronomical Society, 2014, 442, 13-19.	4.4	6
79	Percent-level constraints on baryonic feedback with spectral distortion measurements. Physical Review D, 2022, 105, .	4.7	6
80	Reionization with Simba: How Much Does Astrophysics Matter in Modeling Cosmic Reionization?. Astrophysical Journal, 2022, 931, 62.	4.5	6
81	Dipole distortions in the intergalactic medium. Monthly Notices of the Royal Astronomical Society, 2019, 487, 4181-4189.	4.4	1
82	Small scales structures and neutrino masses. Nuclear and Particle Physics Proceedings, 2015, 265-266, 56-59.	0.5	0