

# Matias Zaldarriaga

## List of Publications by Year in descending order

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105  
papers

15,389  
citations

18482

62  
h-index

34986

98  
g-index

105  
all docs

105  
docs citations

105  
times ranked

4950  
citing authors

#	ARTICLE	IF	CITATIONS
1	Gravitational waves and the scale of inflation. <i>Physical Review D</i> , 2015, 91, .	4.7	44
2	New sources of gravitational waves during inflation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2014, 2014, 016-016.	5.4	73
3	Moving-mesh cosmology: properties of neutral hydrogen in absorption. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 429, 3341-3352.	4.4	52
4	Perturbed recombination from dark matter annihilation. <i>Physical Review D</i> , 2013, 87, .	4.7	14
5	The effective field theory of multifield inflation. <i>Journal of High Energy Physics</i> , 2012, 2012, 1.	4.7	143
6	Algorithms for bispectra: forecasting, optimal analysis and simulation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 417, 2-19.	4.4	91
7	The signatures of large-scale temperature and intensity fluctuations in the Lyman $\hat{\pm}$ forest. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 415, 977-992.	4.4	46
8	A naturally large four-point function in single field inflation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 003-003.	5.4	57
9	Software systems for operation, control, and monitoring of the EBEX instrument. <i>Proceedings of SPIE</i> , 2010, , .	0.8	7
10	Ly $\hat{\pm}$ COOLING EMISSION FROM GALAXY FORMATION. <i>Astrophysical Journal</i> , 2010, 725, 633-657.	4.5	196
11	A MEASUREMENT OF SMALL-SCALE STRUCTURE IN THE 2.2 $\hat{\pm}$ 4.2 Ly $\hat{\pm}$ FOREST. <i>Astrophysical Journal</i> , 2010, 718, 199-230.	4.5	131
12	Precision calibration of radio interferometers using redundant baselines. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 408, 1029-1050.	4.4	86
13	Primordial $B$ -mode diagnostics and self-calibrating the CMB polarization. <i>Physical Review D</i> , 2010, 81, .	4.7	29
14	Lensing reconstruction of cluster-mass cross correlation with cosmic microwave background polarization. <i>Physical Review D</i> , 2010, 81, .	4.7	16
15	Omniscopes: Large area telescope arrays with only $N$ log $N$ computational cost. <i>Physical Review D</i> , 2010, 82, .	4.7	57
16	He II REIONIZATION AND ITS EFFECT ON THE INTERGALACTIC MEDIUM. <i>Astrophysical Journal</i> , 2009, 694, 842-866.	4.5	219
17	PROBING REIONIZATION WITH THE 21 CM GALAXY CROSS-POWER SPECTRUM. <i>Astrophysical Journal</i> , 2009, 690, 252-266.	4.5	93
18	A NEW CALCULATION OF THE IONIZING BACKGROUND SPECTRUM AND THE EFFECTS OF He II REIONIZATION. <i>Astrophysical Journal</i> , 2009, 703, 1416-1443.	4.5	529

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19	Causality and primordial tensor modes. <i>Journal of Cosmology and Astroparticle Physics</i> , 2009, 2009, 013-013.	5.4	16
20	Will point sources spoil 21-cm tomography?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 394, 1575-1587.	4.4	75
21	An improved method for 21-cm foreground removal. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 398, 401-406.	4.4	110
22	Impact of instrumental systematic contamination on the lensing mass reconstruction using the CMB polarization. <i>Physical Review D</i> , 2009, 79, .	4.7	11
23	New perspective on galaxy clustering as a cosmological probe: General relativistic effects. <i>Physical Review D</i> , 2009, 80, .	4.7	255
24	Constraining a spatially dependent rotation of the cosmic microwave background polarization. <i>Physical Review D</i> , 2009, 79, .	4.7	52
25	Fast Fourier transform telescope. <i>Physical Review D</i> , 2009, 79, .	4.7	99
26	Probing Inflation with CMB Polarization. , 2009, , .		252
27	Reionization Science with the Cosmic Microwave Background. , 2009, , .		3
28	A Mission to Map our Origins. , 2009, , .		11
29	Probing the neutral fraction of the IGM with GRBs during the epoch of reionization. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, , ???-???.	4.4	39
30	How accurately can 21-cm tomography constrain cosmology?. <i>Physical Review D</i> , 2008, 78, .	4.7	202
31	Improved estimation of cluster mass profiles from the cosmic microwave background. <i>Physical Review D</i> , 2008, 78, .	4.7	22
32	A Flat Photoionization Rate at $2 < i > z < / i > \hat{=} 4.2$ : Evidence for a Stellar-Dominated UV Background and against a Decline of Cosmic Star Formation beyond $< i > z < / i > \sim 3$ . <i>Astrophysical Journal</i> , 2008, 682, L9-L12.	4.5	77
33	Detecting the Rise and Fall of 21 cm Fluctuations with the Murchison Widefield Array. <i>Astrophysical Journal</i> , 2008, 680, 962-974.	4.5	144
34	The Line-of-Sight Proximity Effect and the Mass of Quasar Host Halos. <i>Astrophysical Journal</i> , 2008, 673, 39-61.	4.5	39
35	Evolution of the Intergalactic Opacity: Implications for the Ionizing Background, Cosmic Star Formation, and Quasar Activity. <i>Astrophysical Journal</i> , 2008, 688, 85-107.	4.5	208
36	A Direct Precision Measurement of the Intergalactic Ly $\alpha$ Opacity at $2 < i > z < / i > \hat{=} 4.2$ . <i>Astrophysical Journal</i> , 2008, 681, 831-855.	4.5	199

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37	Simulations and Analytic Calculations of Bubble Growth during Hydrogen Reionization. <i>Astrophysical Journal</i> , 2007, 654, 12-26.	4.5	273
38	Quasar Proximity Zones and Patchy Reionization. <i>Astrophysical Journal</i> , 2007, 670, 39-59.	4.5	102
39	Higher Order Contributions to the 21 cm Power Spectrum. <i>Astrophysical Journal</i> , 2007, 659, 865-876.	4.5	57
40	Eavesdropping on radio broadcasts from galactic civilizations with upcoming observatories for redshifted 21 cm radiation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2007, 2007, 020-020.	5.4	28
41	General solution to the $E < B >$ mixing problem. <i>Physical Review D</i> , 2007, 76, .	4.7	77
42	Studying reionization with Ly $\alpha$ emitters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 381, 75-96.	4.4	212
43	Lensing Reconstruction Using Redshifted 21 Centimeter Fluctuations. <i>Astrophysical Journal</i> , 2006, 653, 922-935.	4.5	61
44	Weak Gravitational Lensing of High-Redshift 21 cm Power Spectra. <i>Astrophysical Journal</i> , 2006, 647, 719-736.	4.5	21
45	The Impact of Temperature Fluctuations on the Ly $\alpha$ Forest Power Spectrum. <i>Astrophysical Journal</i> , 2006, 644, 61-70.	4.5	30
46	The kinetic Sunyaev-Zel'dovich effect from reionization. <i>New Astronomy Reviews</i> , 2006, 50, 84-88.	12.8	4
47	Cosmological Parameter Estimation Using 21 cm Radiation from the Epoch of Reionization. <i>Astrophysical Journal</i> , 2006, 653, 815-834.	4.5	385
48	The Kinetic Sunyaev-Zel'dovich Effect from Reionization. <i>Astrophysical Journal</i> , 2005, 630, 643-656.	4.5	125
49	The Influence of Nonuniform Reionization on the CMB. <i>Astrophysical Journal</i> , 2005, 630, 657-666.	4.5	97
50	Small-scale power spectrum of cold dark matter. <i>Physical Review D</i> , 2005, 71, .	4.7	206
51	Instability of dark energy with mass-varying neutrinos. <i>Physical Review D</i> , 2005, 72, .	4.7	129
52	Measuring the Small-Scale Power Spectrum of Cosmic Density Fluctuations through 21cm Tomography Prior to the Epoch of Structure Formation. <i>Physical Review Letters</i> , 2004, 92, 211301.	7.8	279
53	The end of unified dark matter?. <i>Physical Review D</i> , 2004, 69, .	4.7	357
54	CMBFIT: Rapid WMAP likelihood calculations with normal parameters. <i>Physical Review D</i> , 2004, 69, .	4.7	22

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55	Significance of the largest scale CMB fluctuations in WMAP. <i>Physical Review D</i> , 2004, 69, .	4.7	488
56	Statistical Probes of Reionization with 21 Centimeter Tomography. <i>Astrophysical Journal</i> , 2004, 613, 16-22.	4.5	177
57	21 Centimeter Fluctuations from Cosmic Gas at High Redshifts. <i>Astrophysical Journal</i> , 2004, 608, 622-635.	4.5	368
58	The Growth of HiiRegions During Reionization. <i>Astrophysical Journal</i> , 2004, 613, 1-15.	4.5	508
59	The EBEX experiment. , 2004, , .		76
60	Benchmark parameters for CMB polarization experiments. <i>Physical Review D</i> , 2003, 67, .	4.7	142
61	First attempt at measuring the CMB cross-polarization. <i>Physical Review D</i> , 2003, 67, .	4.7	14
62	Probing the Friedmann equation during recombination with future cosmic microwave background experiments. <i>Physical Review D</i> , 2003, 67, .	4.7	62
63	E/Bdecomposition of finite pixelized CMB maps. <i>Physical Review D</i> , 2003, 67, .	4.7	125
64	Comparison of cosmological Boltzmann codes: Are we ready for high precision cosmology?. <i>Physical Review D</i> , 2003, 68, .	4.7	75
65	Last stand before WMAP: Cosmological parameters from lensing, CMB, and galaxy clustering. <i>Physical Review D</i> , 2003, 68, .	4.7	48
66	Inferring the Linear Power Spectrum from the Ly $\hat{\pm}$ Forest. <i>Astrophysical Journal</i> , 2003, 590, 1-7.	4.5	51
67	Higher Order Moments of the Cosmic Shear and Other Spin $\hat{\pm}2$ Fields. <i>Astrophysical Journal</i> , 2003, 584, 559-565.	4.5	35
68	Is cosmology consistent?. <i>Physical Review D</i> , 2002, 65, .	4.7	132
69	Separating the early universe from the late universe: Cosmological parameter estimation beyond the black box. <i>Physical Review D</i> , 2002, 66, .	4.7	105
70	Supernovae, CMB, and gravitational leakage into extra dimensions. <i>Physical Review D</i> , 2002, 66, .	4.7	155
71	The Imprint of Lithium Recombination on the Microwave Background Anisotropies. <i>Astrophysical Journal</i> , 2002, 564, 52-59.	4.5	17
72	Searching for Fluctuations in the Intergalactic Medium Temperature Using the Ly $\hat{\pm}$ Forest. <i>Astrophysical Journal</i> , 2002, 564, 153-161.	4.5	38

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73	Connections between the Cosmic Baryon Fraction, the Extragalactic Ionizing Background, and Lyman Break Galaxies. <i>Astrophysical Journal</i> , 2002, 564, 525-533.	4.5	21
74	How Neutral Is the Intergalactic Medium at $z \approx 6$ ?. <i>Astrophysical Journal</i> , 2002, 579, 491-499.	4.5	33
75	Correlations in the Spatial Power Spectra Inferred from Angular Clustering: Methods and Application to the Automated Plate Measuring Survey. <i>Astrophysical Journal</i> , 2001, 546, 2-19.	4.5	60
76	Constraints from the Ly $\alpha$ Forest Power Spectrum. <i>Astrophysical Journal</i> , 2001, 557, 519-526.	4.5	130
77	Cosmic Microwave Background Observables and Their Cosmological Implications. <i>Astrophysical Journal</i> , 2001, 549, 669-680.	4.5	207
78	Constraining nonstandard recombination: A worked example. <i>Physical Review D</i> , 2001, 63, .	4.7	33
79	Towards a refined cosmic concordance model: Joint 11-parameter constraints from the cosmic microwave background and large-scale structure. <i>Physical Review D</i> , 2001, 63, .	4.7	114
80	Nature of the $E$ - $B$ decomposition of CMB polarization. <i>Physical Review D</i> , 2001, 64, .	4.7	67
81	Lensing of the CMB: Non-Gaussian Aspects. <i>Annals of the New York Academy of Sciences</i> , 2001, 927, 84-93.	3.8	0
82	Latest Cosmological Constraints on the Densities of Hot and Cold Dark Matter. , 2001, , 128-137.		0
83	CMBFAST for Spatially Closed Universes. <i>Astrophysical Journal, Supplement Series</i> , 2000, 129, 431-434.	7.7	85
84	Lensing effect on polarization in the microwave background: Extracting the convergence power spectrum. <i>Physical Review D</i> , 2000, 62, .	4.7	33
85	Lensing of the CMB: Non-Gaussian aspects. <i>Physical Review D</i> , 2000, 62, .	4.7	91
86	New Microwave Background Constraints on the Cosmic Matter Budget: Trouble for Nucleosynthesis?. <i>Physical Review Letters</i> , 2000, 85, 2240-2243.	7.8	98
87	Current Cosmological Constraints from a 10 Parameter Cosmic Microwave Background Analysis. <i>Astrophysical Journal</i> , 2000, 544, 30-42.	4.5	90
88	An Introduction to CMB Anisotropies. <i>Astrophysics and Space Science Library</i> , 2000, , 213-278.	2.7	0
89	Reconstructing projected matter density power spectrum from cosmic microwave background. <i>Physical Review D</i> , 1999, 59, .	4.7	173
90	Measuring Dark Matter Power Spectrum from Cosmic Microwave Background. <i>Physical Review Letters</i> , 1999, 82, 2636-2639.	7.8	96

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91	Direct signature of an evolving gravitational potential from the cosmic microwave background. Physical Review D, 1999, 60, .	4.7	71
92	Power Spectrum Correlations Induced by Nonlinear Clustering. Astrophysical Journal, 1999, 527, 1-15.	4.5	201
93	Gravitational lensing effect on cosmic microwave background polarization. Physical Review D, 1998, 58, .	4.7	400
94	Complete treatment of CMB anisotropies in a FRW universe. Physical Review D, 1998, 57, 3290-3301.	4.7	145
95	Integral Solution for the Microwave Background Anisotropies in Nonflat Universes. Astrophysical Journal, 1998, 494, 491-502.	4.5	101
96	Cosmic Microwave Background Polarization Experiments. Astrophysical Journal, 1998, 503, 1-15.	4.5	65
97	Cosmic Microwave Background Polarization as a Direct Test of Inflation. Physical Review Letters, 1997, 79, 2180-2183.	7.8	91
98	Polarization of the microwave background in reionized models. Physical Review D, 1997, 55, 1822-1829.	4.7	163
99	Depolarization of the cosmic microwave background by a primordial magnetic field and its effect upon temperature anisotropy. Physical Review D, 1997, 55, 1841-1850.	4.7	62
100	Microwave Background Constraints on Cosmological Parameters. Astrophysical Journal, 1997, 488, 1-13.	4.5	360
101	All-sky analysis of polarization in the microwave background. Physical Review D, 1997, 55, 1830-1840.	4.7	884
102	Signature of Gravity Waves in the Polarization of the Microwave Background. Physical Review Letters, 1997, 78, 2054-2057.	7.8	772
103	A Line-of-Sight Integration Approach to Cosmic Microwave Background Anisotropies. Astrophysical Journal, 1996, 469, 437.	4.5	1,788
104	Analytic approach to the polarization of the cosmic microwave background in flat and open universes. Physical Review D, 1995, 52, 3276-3287.	4.7	131
105	Polarization of the microwave background in inflationary cosmology. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 319, 96-103.	4.1	46