

# Matthias Bartelmann

## List of Publications by Year in descending order

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108  
papers

9,215  
citations

66315

42  
h-index

38368

95  
g-index

115  
all docs

115  
docs citations

115  
times ranked

5397  
citing authors

#	ARTICLE	IF	CITATIONS
1	Model independent analysis of supernova data, dark energy, trans-Planckian censorship and the swampland. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2021, 812, 135990.	1.5	5
2	Resummed kinetic field theory: a model of coupled baryonic and dark matter. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 046-046.	1.9	2
3	A first comparison of Kinetic Field Theory with Eulerian Standard Perturbation Theory. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 035.	1.9	4
4	Kinetic field theory: Non-linear cosmic power spectra in the mean-field approximation. <i>SciPost Physics</i> , 2021, 10, .	1.5	7
5	Resummed Kinetic Field Theory: general formalism and linear structure growth from Newtonian particle dynamics. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 001-001.	1.9	11
6	Kinetic field theory applied to vector-tensor gravity. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 796, 59-64.	1.5	4
7	Horndeski gravity in the swampland. <i>Physical Review D</i> , 2019, 99, .	1.6	16
8	Dark energy in the Swampland II. <i>Science China: Physics, Mechanics and Astronomy</i> , 2019, 62, 1.	2.0	17
9	Resummed Kinetic Field Theory: using Mesoscopic Particle Hydrodynamics to describe baryonic matter in a cosmological framework. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 017-017.	1.9	7
10	Joint cluster reconstructions. <i>Astronomy and Astrophysics</i> , 2019, 627, A143.	2.1	3
11	Cosmic Structure Formation with Kinetic Field Theory. <i>Annalen Der Physik</i> , 2019, 531, 1800446.	0.9	21
12	Kinetic field theory: cosmic structure formation and fluctuation-dissipation relations. <i>Journal of Physics Communications</i> , 2018, 2, 025020.	0.5	5
13	Kinetic field theory: exact free evolution of Gaussian phase-space correlations. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2018, 2018, 043214.	0.9	11
14	Long range effects in gravity theories with Vainshtein screening. <i>Journal of Cosmology and Astroparticle Physics</i> , 2018, 2018, 009-009.	1.9	13
15	Dark energy in the swampland. <i>Physical Review D</i> , 2018, 98, .	1.6	98
16	On the implementation of the spherical collapse model for dark energy models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 040-040.	1.9	24
17	CLASH: accurate photometric redshifts with 14 HST bands in massive galaxy cluster cores. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 470, 95-113.	1.6	39
18	Kinetic field theory: effects of momentum correlations on the cosmic density-fluctuation power spectrum. <i>New Journal of Physics</i> , 2017, 19, 083001.	1.2	19

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19	Linear perturbations in spherically symmetric dust cosmologies including a cosmological constant. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 025-025.	1.9	2
20	Light propagation in linearly perturbed $\Lambda$ -LTB models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2017, 2017, 037-037.	1.9	0
21	A microscopic, non-equilibrium, statistical field theory for cosmic structure formation. <i>New Journal of Physics</i> , 2016, 18, 043020.	1.2	32
22	Trajectories of point particles in cosmology and the Zel'dovich approximation. <i>Physical Review D</i> , 2015, 91, .	1.6	19
23	The projected gravitational potential of the galaxy cluster MACS J1206 derived from galaxy kinematics. <i>Astronomy and Astrophysics</i> , 2015, 584, A63.	2.1	9
24	Constraints on $\Omega_m$ and $f\sigma_8$ from the potential-based cluster temperature function. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 454, 1687-1696.	1.6	11
25	Reconstructing the projected gravitational potential of Abell 1689 from X-ray measurements. <i>Astronomy and Astrophysics</i> , 2015, 574, A122.	2.1	8
26	Nonequilibrium statistical field theory for classical particles: Basic kinetic theory. <i>Physical Review E</i> , 2015, 91, 062120.	0.8	10
27	Evolution of linear perturbations in Lemaître-Tolman-Bondi void models. <i>Journal of Cosmology and Astroparticle Physics</i> , 2015, 2015, 053-053.	1.9	5
28	CLASH: EXTREME EMISSION-LINE GALAXIES AND THEIR IMPLICATION ON SELECTION OF HIGH-REDSHIFT GALAXIES. <i>Astrophysical Journal</i> , 2015, 801, 12.	1.6	10
29	CLASH: THE CONCENTRATION-MASS RELATION OF GALAXY CLUSTERS. <i>Astrophysical Journal</i> , 2015, 806, 4.	1.6	170
30	HUBBLE SPACE TELESCOPE COMBINED STRONG AND WEAK LENSING ANALYSIS OF THE CLASH SAMPLE: MASS AND MAGNIFICATION MODELS AND SYSTEMATIC UNCERTAINTIES. <i>Astrophysical Journal</i> , 2015, 801, 44.	1.6	207
31	Reconstructing the projected gravitational potential of galaxy clusters from galaxy kinematics. <i>Astronomy and Astrophysics</i> , 2014, 570, A9.	2.1	8
32	THE MUSIC OF CLASH: PREDICTIONS ON THE CONCENTRATION-MASS RELATION. <i>Astrophysical Journal</i> , 2014, 797, 34.	1.6	115
33	Gravitationslinsen erhellen das Dunkel. <i>Physik in Unserer Zeit</i> , 2014, 45, 220-227.	0.0	1
34	CLASH-X: A COMPARISON OF LENSING AND X-RAY TECHNIQUES FOR MEASURING THE MASS PROFILES OF GALAXY CLUSTERS. <i>Astrophysical Journal</i> , 2014, 794, 136.	1.6	105
35	CLASH: EXTENDING GALAXY STRONG LENSING TO SMALL PHYSICAL SCALES WITH DISTANT SOURCES HIGHLY MAGNIFIED BY GALAXY CLUSTER MEMBERS. <i>Astrophysical Journal</i> , 2014, 786, 11.	1.6	13
36	A comparison of structure formation in minimally and non-minimally coupled quintessence models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 437, 547-561.	1.6	54

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37	A CENSUS OF STAR-FORMING GALAXIES IN THE $z \sim 9-10$ UNIVERSE BASED ON HST+SPITZER OBSERVATIONS OVER 19 CLASH CLUSTERS: THREE CANDIDATE $z \sim 9-10$ GALAXIES AND IMPROVED CONSTRAINTS ON THE STAR FORMATION RATE DENSITY AT $z \sim 9.2$ . <i>Astrophysical Journal</i> , 2014, 795, 126.	1.6	159
38	CLASH: A CENSUS OF MAGNIFIED STAR-FORMING GALAXIES AT $z \sim 6-8$ . <i>Astrophysical Journal</i> , 2014, 792, 76.	1.6	98
39	EVIDENCE FOR UBIQUITOUS HIGH-EQUIVALENT-WIDTH NEBULAR EMISSION IN $z \sim 7$ GALAXIES: TOWARD A CLEAN MEASUREMENT OF THE SPECIFIC STAR-FORMATION RATE USING A SAMPLE OF BRIGHT, MAGNIFIED GALAXIES. <i>Astrophysical Journal</i> , 2014, 784, 58.	1.6	232
40	CLASH: $z \sim 6$ young galaxy candidate quintuply lensed by the frontier field cluster RXC J2248.7 $\hat{a}$ '4431. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 438, 1417-1434.	1.6	49
41	CLASH-VLT: CONSTRAINTS ON THE DARK MATTER EQUATION OF STATE FROM ACCURATE MEASUREMENTS OF GALAXY CLUSTER MASS PROFILES. <i>Astrophysical Journal Letters</i> , 2014, 783, L11.	3.0	23
42	THREE GRAVITATIONALLY LENSED SUPERNOVAE BEHIND CLASH GALAXY CLUSTERS. <i>Astrophysical Journal</i> , 2014, 786, 9.	1.6	45
43	Internal Cluster Structure. <i>Space Science Reviews</i> , 2013, 177, 3-29.	3.7	13
44	Arc Statistics. <i>Space Science Reviews</i> , 2013, 177, 31-74.	3.7	52
45	Masses of Galaxy Clusters from Gravitational Lensing. <i>Space Science Reviews</i> , 2013, 177, 75-118.	3.7	127
46	The Three-Dimensional Shapes of Galaxy Clusters. <i>Space Science Reviews</i> , 2013, 177, 155-194.	3.7	85
47	Estimation of halo ellipticity using spin-3 flexion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 428, 103-108.	1.6	4
48	Perturbation theory trispectrum in the time renormalization approach. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 428, 3173-3182.	1.6	1
49	CLASH: COMPLETE LENSING ANALYSIS OF THE LARGEST COSMIC LENS MACS J0717.5+3745 AND SURROUNDING STRUCTURES. <i>Astrophysical Journal</i> , 2013, 777, 43.	1.6	79
50	GALAXY HALO TRUNCATION AND GIANT ARC SURFACE BRIGHTNESS RECONSTRUCTION IN THE CLUSTER MACSJ1206.2-0847. <i>Astrophysical Journal</i> , 2013, 774, 124.	1.6	24
51	THE CONTRIBUTION OF HALOS WITH DIFFERENT MASS RATIOS TO THE OVERALL GROWTH OF CLUSTER-SIZED HALOS. <i>Astrophysical Journal</i> , 2013, 776, 91.	1.6	33
52	THE CLUSTER LENSING AND SUPERNOVA SURVEY WITH HUBBLE: AN OVERVIEW. <i>Astrophysical Journal</i> , Supplement Series, 2012, 199, 25.	3.0	659
53	CLASH: NEW MULTIPLE IMAGES CONSTRAINING THE INNER MASS PROFILE OF MACS J1206.2 $\hat{a}$ "0847. <i>Astrophysical Journal</i> , 2012, 749, 97.	1.6	58
54	CLASH: MASS DISTRIBUTION IN AND AROUND MACS J1206.2-0847 FROM A FULL CLUSTER LENSING ANALYSIS. <i>Astrophysical Journal</i> , 2012, 755, 56.	1.6	101



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73	Cosmic reionization in dynamic quintessence cosmology. Monthly Notices of the Royal Astronomical Society, 2008, 385, 728-736.	1.6	4
74	Full-sky maps for gravitational lensing of the cosmic microwave background. Monthly Notices of the Royal Astronomical Society, 2008, 388, 1618-1626.	1.6	41
75	Comparisons between Isothermal and NFW Mass Profiles for Strongly Lensing Galaxy Clusters. Astrophysical Journal, 2008, 685, 70-82.	1.6	15
76	Buchbesprechung: Physik, Bachelor-Edition. Von D. Halliday, R. Resnick, J. Walker. Physik in Unserer Zeit, 2007, 38, 255-255.	0.0	0
77	The effects of ellipticity and substructure on estimates of cluster density profiles based on lensing and kinematics. Monthly Notices of the Royal Astronomical Society, 2007, 381, 171-186.	1.6	38
78	Mass Distributions of Hubble Space Telescope Galaxy Clusters from Gravitational Arcs. Astrophysical Journal, 2006, 642, 39-47.	1.6	52
79	Early structure formation in quintessence models and its implications for cosmic reionization from first stars. Monthly Notices of the Royal Astronomical Society, 2006, 373, 869-878.	1.6	45
80	The Lensed Arc Production Efficiency of Galaxy Clusters: A Comparison of Matched Observed and Simulated Samples. Astrophysical Journal, 2005, 633, 768-780.	1.6	49
81	Detection of Cosmic Magnification with the Sloan Digital Sky Survey. Astrophysical Journal, 2005, 633, 589-602.	1.6	204
82	Is the Number of Giant Arcs in $\Lambda$ CDM Consistent with Observations?. Astrophysical Journal, 2005, 635, 795-805.	1.6	55
83	Strong lensing by cluster-sized halos in dark energy cosmologies. New Astronomy Reviews, 2005, 49, 111-114.	5.2	12
84	Evolution of dark-matter haloes in a variety of dark-energy cosmologies. New Astronomy Reviews, 2005, 49, 199-203.	5.2	47
85	Statistical distribution of gravitational-lensing excursion angles: winding ways to us from the deep Universe. Monthly Notices of the Royal Astronomical Society, 2005, 356, 829-838.	1.6	8
86	Constraints on dark energy models from galaxy clusters with multiple arcs. Monthly Notices of the Royal Astronomical Society, 2005, 362, 1301-1310.	1.6	24
87	PROPERTIES OF GALAXY CLUSTERS IN COSMOLOGIES WITH DARK ENERGY. Modern Physics Letters A, 2004, 19, 1079-1082.	0.5	3
88	ARC STATISTICS WITH NUMERICAL CLUSTER MODELS IN DARK ENERGY COSMOLOGIES. Modern Physics Letters A, 2004, 19, 1083-1087.	0.5	4
89	The impact of cluster mergers on arc statistics. Monthly Notices of the Royal Astronomical Society, 2004, 349, 476-490.	1.6	91
90	A Catalog of Compact Groups of Galaxies in the SDSS Commissioning Data. Astronomical Journal, 2004, 127, 1811-1859.	1.9	75

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91	cD galaxy contribution to the strong lensing cross-sections of galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2003, 346, 67-77.	1.6	71
92	Cluster cross-sections for strong lensing: analytic and numerical lens models. Monthly Notices of the Royal Astronomical Society, 2003, 340, 105-114.	1.6	101
93	Probing Intracluster Magnetic Fields with Cosmic Microwave Background Polarization. Astrophysical Journal, 2003, 584, 599-607.	1.6	24
94	Sloan Digital Sky Survey: Early Data Release. Astronomical Journal, 2002, 123, 485-548.	1.9	2,003
95	Lensing by Lyman $\alpha$ Limit Systems: Determining the Mass-to-Gas Ratio. Astrophysical Journal, 2002, 569, 72-82.	1.6	3
96	Weak gravitational lensing. Physics Reports, 2001, 340, 291-472.	10.3	1,711
97	Giant cluster arcs as a constraint on the scattering cross-section of dark matter. Monthly Notices of the Royal Astronomical Society, 2001, 325, 435-442.	1.6	82
98	Effects of cluster galaxies on arc statistics. Monthly Notices of the Royal Astronomical Society, 2000, 314, 338-347.	1.6	75
99	The Core Structure of Galaxy Clusters from Gravitational Lensing. Astrophysical Journal, 1999, 527, 535-544.	1.6	56
100	Gravitational lensing of type Ia supernovae by galaxy clusters. Monthly Notices of the Royal Astronomical Society, 1998, 296, 763-772.	1.6	50
101	Effects of Disks on Gravitational Lensing by Spiral Galaxies. Astrophysical Journal, 1998, 503, 48-60.	1.6	22
102	Effects of Dust on Gravitational Lensing by Spiral Galaxies. Astrophysical Journal, 1997, 488, 550-556.	1.6	16
103	Maximum Likelihood Cluster Reconstruction. Astrophysical Journal, 1996, 464, L115-L118.	1.6	81
104	Redshifts of Faint Blue Galaxies From Gravitational Lensing. Symposium - International Astronomical Union, 1996, 173, 143-148.	0.1	13
105	Gravitational Lensing of Quasi-stellar Objects by Their Damped Ly $\alpha$ Absorbers. Astrophysical Journal, 1996, 457, 529.	1.6	29
106	The Lens Parallax Method: Determining Redshifts of Faint Blue Galaxies through Gravitational Lensing. Astrophysical Journal, 1995, 451, 60.	1.6	30
107	Gravitational lensing by large-scale structures. , 1991, , 345-349.		0
108	Halo model description of the non-linear dark matter power spectrum at $k \ll 1 \text{ h Mpc}^{-1}$ . Monthly Notices of the Royal Astronomical Society, 0, 408, 300-313.	1.6	56