

# 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	Sloan Digital Sky Survey: Early Data Release. <i>Astronomical Journal</i> , 2002, 123, 485-548.	1.9	2,003
2	Weak gravitational lensing. <i>Physics Reports</i> , 2001, 340, 291-472.	10.3	1,711
3	THE CLUSTER LENSING AND SUPERNOVA SURVEY WITH HUBBLE: AN OVERVIEW. <i>Astrophysical Journal, Supplement Series</i> , 2012, 199, 25.	3.0	659
4	Gravitational lensing. <i>Classical and Quantum Gravity</i> , 2010, 27, 233001.	1.5	294
5	A magnified young galaxy from about 500 million years after the Big Bang. <i>Nature</i> , 2012, 489, 406-408.	13.7	273
6	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
7	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
8	Detection of Cosmic Magnification with the Sloan Digital Sky Survey. <i>Astrophysical Journal</i> , 2005, 633, 589-602.	1.6	204
9	CLASH: THE CONCENTRATION-MASS RELATION OF GALAXY CLUSTERS. <i>Astrophysical Journal</i> , 2015, 806, 4.	1.6	170
10	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
11	Masses of Galaxy Clusters from Gravitational Lensing. <i>Space Science Reviews</i> , 2013, 177, 75-118.	3.7	127
12	THE MUSIC OF CLASH: PREDICTIONS ON THE CONCENTRATION-MASS RELATION. <i>Astrophysical Journal</i> , 2014, 797, 34.	1.6	115
13	CLASH: PRECISE NEW CONSTRAINTS ON THE MASS PROFILE OF THE GALAXY CLUSTER A2261. <i>Astrophysical Journal</i> , 2012, 757, 22.	1.6	112
14	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
15	Cluster cross-sections for strong lensing: analytic and numerical lens models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 340, 105-114.	1.6	101
16	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
17	CLASH: A CENSUS OF MAGNIFIED STAR-FORMING GALAXIES AT $z \sim 6-8$ . <i>Astrophysical Journal</i> , 2014, 792, 76.	1.6	98
18	Dark energy in the swampland. <i>Physical Review D</i> , 2018, 98, .	1.6	98

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19	The dark Universe. <i>Reviews of Modern Physics</i> , 2010, 82, 331-382.	16.4	95
20	The impact of cluster mergers on arc statistics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 349, 476-490.	1.6	91
21	The Three-Dimensional Shapes of Galaxy Clusters. <i>Space Science Reviews</i> , 2013, 177, 155-194.	3.7	85
22	Giant cluster arcs as a constraint on the scattering cross-section of dark matter. <i>Monthly Notices of the Royal Astronomical Society</i> , 2001, 325, 435-442.	1.6	82
23	Maximum Likelihood Cluster Reconstruction. <i>Astrophysical Journal</i> , 1996, 464, L115-L118.	1.6	81
24	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
25	Effects of cluster galaxies on arc statistics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2000, 314, 338-347.	1.6	75
26	A Catalog of Compact Groups of Galaxies in the SDSS Commissioning Data. <i>Astronomical Journal</i> , 2004, 127, 1811-1859.	1.9	75
27	cD galaxy contribution to the strong lensing cross-sections of galaxy clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 346, 67-77.	1.6	71
28	THE CLUSTER LENSING AND SUPERNOVA SURVEY WITH <i>HUBBLE</i> (CLASH): STRONG-LENSING ANALYSIS OF A383 FROM 16-BAND <i>HST</i> /WFC3/ACS IMAGING. <i>Astrophysical Journal</i> , 2011, 742, 117.	1.6	63
29	CLASH: NEW MULTIPLE IMAGES CONSTRAINING THE INNER MASS PROFILE OF MACS J1206.2+0847. <i>Astrophysical Journal</i> , 2012, 749, 97.	1.6	58
30	Halo model description of the non-linear dark matter power spectrum at $k \approx 1 \text{ h Mpc}^{-1}$ . <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 408, 300-313.	1.6	56
31	The Core Structure of Galaxy Clusters from Gravitational Lensing. <i>Astrophysical Journal</i> , 1999, 527, 535-544.	1.6	56
32	Is the Number of Giant Arcs in $\Lambda$ CDM Consistent with Observations?. <i>Astrophysical Journal</i> , 2005, 635, 795-805.	1.6	55
33	Miscentring in galaxy clusters: dark matter to brightest cluster galaxy offsets in 10% Sloan Digital Sky Survey clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 426, 2944-2956.	1.6	54
34	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
35	Mass Distributions of Hubble Space Telescope Galaxy Clusters from Gravitational Arcs. <i>Astrophysical Journal</i> , 2006, 642, 39-47.	1.6	52
36	Arc Statistics. <i>Space Science Reviews</i> , 2013, 177, 31-74.	3.7	52

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37	Gravitational lensing of type Ia supernovae by galaxy clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 1998, 296, 763-772.	1.6	50
38	The Lensed Arc Production Efficiency of Galaxy Clusters: A Comparison of Matched Observed and Simulated Samples. <i>Astrophysical Journal</i> , 2005, 633, 768-780.	1.6	49
39	moka: a new tool for strong lensing studies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 421, 3343-3355.	1.6	49
40	CLASH: $z \approx 6$ 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	Evolution of dark-matter haloes in a variety of dark-energy cosmologies. <i>New Astronomy Reviews</i> , 2005, 49, 199-203.	5.2	47
42	Early structure formation in quintessence models and its implications for cosmic reionization from first stars. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 373, 869-878.	1.6	45
43	THREE GRAVITATIONALLY LENSED SUPERNOVAE BEHIND CLASH GALAXY CLUSTERS. <i>Astrophysical Journal</i> , 2014, 786, 9.	1.6	45
44	Full-sky maps for gravitational lensing of the cosmic microwave background. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 388, 1618-1626.	1.6	41
45	The universal Einstein radius distribution from $10^6$ SDSS clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 423, 2308-2324.	1.6	39
46	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
47	The effects of ellipticity and substructure on estimates of cluster density profiles based on lensing and kinematics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 381, 171-186.	1.6	38
48	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
49	A microscopic, non-equilibrium, statistical field theory for cosmic structure formation. <i>New Journal of Physics</i> , 2016, 18, 043020.	1.2	32
50	The Lens Parallax Method: Determining Redshifts of Faint Blue Galaxies through Gravitational Lensing. <i>Astrophysical Journal</i> , 1995, 451, 60.	1.6	30
51	Gravitational Lensing of Quasi-stellar Objects by Their Damped Ly $\alpha$ Absorbers. <i>Astrophysical Journal</i> , 1996, 457, 529.	1.6	29
52	Lensed CMB temperature and polarization maps from the Millennium Simulation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 396, 668-679.	1.6	26
53	Probing Intracluster Magnetic Fields with Cosmic Microwave Background Polarization. <i>Astrophysical Journal</i> , 2003, 584, 599-607.	1.6	24
54	Constraints on dark energy models from galaxy clusters with multiple arcs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 362, 1301-1310.	1.6	24

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55	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
56	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
57	Lensed arc statistics: comparison of Millennium simulation galaxy clusters to Hubble Space Telescope observations of an X-ray selected sample. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 418, 54-63.	1.6	23
58	Relativistic virialization in the spherical collapse model for Einstein-de Sitter and $\Lambda$ CDM cosmologies. <i>Physical Review D</i> , 2012, 86, .	1.6	23
59	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
60	Effects of Disks on Gravitational Lensing by Spiral Galaxies. <i>Astrophysical Journal</i> , 1998, 503, 48-60.	1.6	22
61	Cosmic Structure Formation with Kinetic Field Theory. <i>Annalen Der Physik</i> , 2019, 531, 1800446.	0.9	21
62	Probing ionizing radiation of $z \sim 0.1$ star-forming galaxies at $z \sim 3$ with strong lensing. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2012, 424, L54-L58.	1.2	20
63	Trajectories of point particles in cosmology and the Zel'dovich approximation. <i>Physical Review D</i> , 2015, 91, .	1.6	19
64	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
65	Dark energy in the Swampland II. <i>Science China: Physics, Mechanics and Astronomy</i> , 2019, 62, 1.	2.0	17
66	Horndeski gravity in the swampland. <i>Physical Review D</i> , 2019, 99, .	1.6	16
67	Effects of Dust on Gravitational Lensing by Spiral Galaxies. <i>Astrophysical Journal</i> , 1997, 488, 550-556.	1.6	16
68	Comparisons between Isothermal and NFW Mass Profiles for Strongly Lensing Galaxy Clusters. <i>Astrophysical Journal</i> , 2008, 685, 70-82.	1.6	15
69	Redshifts of Faint Blue Galaxies From Gravitational Lensing. <i>Symposium - International Astronomical Union</i> , 1996, 173, 143-148.	0.1	13
70	Internal Cluster Structure. <i>Space Science Reviews</i> , 2013, 177, 3-29.	3.7	13
71	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
72	Long range effects in gravity theories with Vainshtein screening. <i>Journal of Cosmology and Astroparticle Physics</i> , 2018, 2018, 009-009.	1.9	13

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73	Strong lensing by cluster-sized halos in dark energy cosmologies. <i>New Astronomy Reviews</i> , 2005, 49, 111-114.	5.2	12
74	The lensing efficiencies of MACS X-ray-selected versus RCS optically selected galaxy clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, , no-no.	1.6	11
75	Constraints on $\hat{\sigma}_m$ and $\hat{f}_8$ from the potential-based cluster temperature function. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 454, 1687-1696.	1.6	11
76	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
77	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
78	Nonequilibrium statistical field theory for classical particles: Basic kinetic theory. <i>Physical Review E</i> , 2015, 91, 062120.	0.8	10
79	CLASH: EXTREME EMISSION-LINE GALAXIES AND THEIR IMPLICATION ON SELECTION OF HIGH-REDSHIFT GALAXIES. <i>Astrophysical Journal</i> , 2015, 801, 12.	1.6	10
80	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
81	Statistical distribution of gravitational-lensing excursion angles: winding ways to us from the deep Universe. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 356, 829-838.	1.6	8
82	Reconstructing the projected gravitational potential of galaxy clusters from galaxy kinematics. <i>Astronomy and Astrophysics</i> , 2014, 570, A9.	2.1	8
83	Reconstructing the projected gravitational potential of Abell 1689 from X-ray measurements. <i>Astronomy and Astrophysics</i> , 2015, 574, A122.	2.1	8
84	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
85	Kinetic field theory: Non-linear cosmic power spectra in the mean-field approximation. <i>SciPost Physics</i> , 2021, 10, .	1.5	7
86	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
87	Kinetic field theory: cosmic structure formation and fluctuation-dissipation relations. <i>Journal of Physics Communications</i> , 2018, 2, 025020.	0.5	5
88	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
89	ARC STATISTICS WITH NUMERICAL CLUSTER MODELS IN DARK ENERGY COSMOLOGIES. <i>Modern Physics Letters A</i> , 2004, 19, 1083-1087.	0.5	4
90	Cosmic reionization in dynamic quintessence cosmology. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 385, 728-736.	1.6	4

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91	A study of relative velocity statistics in Lagrangian perturbation theory with PINOCCHIO. Monthly Notices of the Royal Astronomical Society, 2011, 416, 3057-3066.	1.6	4
92	Estimation of halo ellipticity using spin-3 flexion. Monthly Notices of the Royal Astronomical Society, 2013, 428, 103-108.	1.6	4
93	Kinetic field theory applied to vector-tensor gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 796, 59-64.	1.5	4
94	A first comparison of Kinetic Field Theory with Eulerian Standard Perturbation Theory. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 035.	1.9	4
95	PROPERTIES OF GALAXY CLUSTERS IN COSMOLOGIES WITH DARK ENERGY. Modern Physics Letters A, 2004, 19, 1079-1082.	0.5	3
96	Die dunkle Seite des Kosmos. Dunkle Materie. Physik in Unserer Zeit, 2009, 40, 74-81.	0.0	3
97	Joint cluster reconstructions. Astronomy and Astrophysics, 2019, 627, A143.	2.1	3
98	Fundamental Cosmological Observations and Data Interpretation. , 2009, , 7-201.		3
99	Lensing by Lyman- $\alpha$ Limit Systems: Determining the Mass-to-Gas Ratio. Astrophysical Journal, 2002, 569, 72-82.	1.6	3
100	Linear perturbations in spherically symmetric dust cosmologies including a cosmological constant. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 025-025.	1.9	2
101	Resummed kinetic field theory: a model of coupled baryonic and dark matter. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 046-046.	1.9	2
102	Editorial: Special Issue: Dark Matter. Annalen Der Physik, 2012, 524, A133-A134.	0.9	1
103	Perturbation theory trispectrum in the time renormalization approach. Monthly Notices of the Royal Astronomical Society, 2013, 428, 3173-3182.	1.6	1
104	Gravitationslinsen erhellen das Dunkel. Physik in Unserer Zeit, 2014, 45, 220-227.	0.0	1
105	Buchbesprechung: Physik, Bachelor-Edition. Von D. Halliday, R. Resnick, J. Walker. Physik in Unserer Zeit, 2007, 38, 255-255.	0.0	0
106	Das beschleunigte Universum. Physik in Unserer Zeit, 2011, 42, 274-275.	0.0	0
107	Light propagation in linearly perturbed $\Lambda$ LTB models. Journal of Cosmology and Astroparticle Physics, 2017, 2017, 037-037.	1.9	0
108	Gravitational lensing by large-scale structures. , 1991, , 345-349.		0