

Robert Benton Metcalf

List of Publications by Year in descending order

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62
papers

2,285
citations

218677

26
h-index

223800

46
g-index

62
all docs

62
docs citations

62
times ranked

1746
citing authors

#	ARTICLE	IF	CITATIONS
1	Compound Gravitational Lensing as a Probe of Dark Matter Substructure within Galaxy Halos. <i>Astrophysical Journal</i> , 2001, 563, 9-20.	4.5	295
2	Flux Ratios as a Probe of Dark Substructures in Quadruple-Image Gravitational Lenses. <i>Astrophysical Journal</i> , 2002, 567, L5-L8.	4.5	172
3	The Uchuu simulations: Data Release 1 and dark matter halo concentrations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 506, 4210-4231.	4.4	108
4	An excess of small-scale gravitational lenses observed in galaxy clusters. <i>Science</i> , 2020, 369, 1347-1351.	12.6	98
5	Detecting dark matter substructure spectroscopically in strong gravitational lenses. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 339, 607-615.	4.4	96
6	Spectroscopic Gravitational Lensing and Limits on the Dark Matter Substructure in Q2237+0305. <i>Astrophysical Journal</i> , 2004, 607, 43-59.	4.5	78
7	The VIMOS Public Extragalactic Redshift Survey (VIPERS). <i>Astronomy and Astrophysics</i> , 2017, 608, A44.	5.1	72
8	The Importance of Intergalactic Structure to Gravitationally Lensed Quasars. <i>Astrophysical Journal</i> , 2005, 629, 673-679.	4.5	69
9	Cosmic cartography of the large-scale structure with Sloan Digital Sky Survey data release 6. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 400, 183-203.	4.4	64
10	Simulations of strong gravitational lensing with substructure. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 367, 1367-1378.	4.4	62
11	Recovering the non-linear density field from the galaxy distribution with a Poisson-lognormal filter. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 403, 589-604.	4.4	62
12	A Fundamental Test of the Nature of Dark Matter. <i>Astrophysical Journal</i> , 1999, 519, L1-L4.	4.5	58
13	glamer â€“ I. A code for gravitational lensing simulations with adaptive mesh refinement. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 445, 1942-1953.	4.4	51
14	glamer â€“ II. Multiple-plane gravitational lensing. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 445, 1954-1966.	4.4	49
15	Gravitational lensing of high-redshift Type Ia supernovae: a probe of medium-scale structure. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 305, 746-754.	4.4	48
16	Flux-ratio anomalies from discs and other baryonic structures in the Illustris simulation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 475, 2438-2451.	4.4	44
17	The Detection of Pure Dark Matter Objects with Bent Multiply Imaged Radio Jets. <i>Astrophysical Journal</i> , 2002, 580, 696-704.	4.5	44
18	The role of black hole mass in quasar radio activity. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 365, 101-109.	4.4	42

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19	Mass and concentration estimates from weak and strong gravitational lensing: a systematic study. Monthly Notices of the Royal Astronomical Society, 2014, 440, 1899-1915.	4.4	42
20	Small-scale structures of dark matter and flux anomalies in quasar gravitational lenses. Monthly Notices of the Royal Astronomical Society, 2012, 419, 3414-3425.	4.4	41
21	Gravitational Magnification of the Cosmic Microwave Background. Astrophysical Journal, 1997, 489, 1-6.	4.5	41
22	Testing Λ CDM with Gravitational Lensing Constraints on Small-Scale Structure. Astrophysical Journal, 2005, 622, 72-80.	4.5	40
23	A PCA-based automated finder for galaxy-scale strong lenses. Astronomy and Astrophysics, 2014, 566, A63.	5.1	39
24	The elliptical power law profile lens. Astronomy and Astrophysics, 2015, 580, A79.	5.1	37
25	New Constraints on Macroscopic Compact Objects as Dark Matter Candidates from Gravitational Lensing of Type Ia Supernovae. Physical Review Letters, 2007, 98, 071302.	7.8	33
26	The PCA Lens-Finder: application to CFHTLS. Astronomy and Astrophysics, 2016, 592, A75.	5.1	27
27	Prospects for clustering and lensing measurements with forthcoming intensity mapping and optical surveys. Monthly Notices of the Royal Astronomical Society, 2016, 459, 863-870.	4.4	27
28	lensed: a code for the forward reconstruction of lenses and sources from strong lensing observations. Monthly Notices of the Royal Astronomical Society, 2016, 463, 3115-3128.	4.4	25
29	SEAGLE "I. A pipeline for simulating and modelling strong lenses from cosmological hydrodynamic simulations. Monthly Notices of the Royal Astronomical Society, 2018, 479, 4108-4125.	4.4	24
30	On Breaking Cosmic Degeneracy. Astrophysical Journal, 1998, 492, L1-L4.	4.5	24
31	Imaging the cosmic matter distribution using gravitational lensing of pre-galactic $H\alpha$. Monthly Notices of the Royal Astronomical Society, 0, 382, 1494-1502.	4.4	23
32	Characterizing dark interactions with the halo mass accretion history and structural properties. Monthly Notices of the Royal Astronomical Society, 2013, 434, 2982-2998.	4.4	23
33	Disentangling dark sector models using weak lensing statistics. Monthly Notices of the Royal Astronomical Society, 2015, 452, 2757-2772.	4.4	23
34	MultiDarkLens Simulations: weak lensing light-cones and data base presentation. Monthly Notices of the Royal Astronomical Society, 2016, 461, 209-223.	4.4	23
35	Weak lensing with 21 cm intensity mapping at $z \sim 2-3$. Monthly Notices of the Royal Astronomical Society: Letters, 2014, 439, L36-L40.	3.3	22
36	Support vector machine classification of strong gravitational lenses. Monthly Notices of the Royal Astronomical Society, 2017, 471, 3378-3397.	4.4	22

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37	High-resolution imaging of the cosmic mass distribution from gravitational lensing of pre-galactic H α . Monthly Notices of the Royal Astronomical Society, 2007, 381, 447-468.	4.4	19
38	Gravitational lensing of cosmological 21 cm emission. Monthly Notices of the Royal Astronomical Society, 2015, 448, 2368-2383.	4.4	18
39	Fast weak-lensing simulations with halo model. Monthly Notices of the Royal Astronomical Society, 2017, 470, 3574-3590.	4.4	18
40	Weak-lensing peaks in simulated light cones: investigating the coupling between dark matter and dark energy. Monthly Notices of the Royal Astronomical Society, 2018, 478, 5436-5448.	4.4	18
41	Cosmological information in the gravitational lensing of pregalactic H α . Monthly Notices of the Royal Astronomical Society, 2009, 394, 704-714.	4.4	17
42	Weak lensing of large scale structure in the presence of screening. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 036-036.	5.4	17
43	Smooth Particle Lensing. Monthly Notices of the Royal Astronomical Society, 2007, 376, 113-124.	4.4	16
44	Systematic errors in strong gravitational lensing reconstructions, a numerical simulation perspective. Monthly Notices of the Royal Astronomical Society, 2020, 496, 1718-1729.	4.4	15
45	Zooming into the Cosmic Horseshoe: new insights on the lens profile and the source shape. Monthly Notices of the Royal Astronomical Society, 2017, 464, 4823-4834.	4.4	14
46	Noise estimates for measurements of weak lensing from the Ly α forest. Monthly Notices of the Royal Astronomical Society, 2018, 477, 2841-2847.	4.4	12
47	Weak lensing of the Lyman α forest. Monthly Notices of the Royal Astronomical Society, 2018, 477, 1814-1821.	4.4	9
48	SEAGLE II. Constraints on feedback models in galaxy formation from massive early-type strong-lens galaxies. Monthly Notices of the Royal Astronomical Society, 2021, 504, 3455-3477.	4.4	9
49	Gravitational Microlensing by Clustered MACHOs. Astrophysical Journal, 1996, 464, 218.	4.5	9
50	The Observatory for Multi-Epoch Gravitational Lens Astrophysics (OMEGA). Proceedings of SPIE, 2008, , .	0.8	8
51	Simulations for 21cm radiation lensing at EoR redshifts. Monthly Notices of the Royal Astronomical Society, 2018, 474, 1787-1809.	4.4	8
52	Probing the structure of dark matter in Galaxy haloes and clusters using supernovae. Monthly Notices of the Royal Astronomical Society, 2001, 327, 115-125.	4.4	7
53	Publisher's Note: New Constraints on Macroscopic Compact Objects as Dark Matter Candidates from Gravitational Lensing of Type Ia Supernovae [Phys. Rev. Lett.98, 071302 (2007)]. Physical Review Letters, 2007, 98, .	7.8	4
54	Gravitational Microlensing by a Galactic Bar. Astronomical Journal, 1995, 110, 869.	4.7	4

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55	The Low Redshift survey at Calar Alto (LoRCA). Monthly Notices of the Royal Astronomical Society, 2016, 458, 2940-2952.	4.4	3
56	SEAGLE III: Towards resolving the mismatch in the dark-matter fraction in early-type galaxies between simulations and observations. Monthly Notices of the Royal Astronomical Society, 2021, 509, 1245-1251.	4.4	3
57	Reconstructing the gravitational lensing potential from the Lyman- α forest. Astronomy and Astrophysics, 2020, 642, A122.	5.1	3
58	Extragalactic integral field spectroscopy on the Gemini telescopes. Astronomische Nachrichten, 2004, 325, 139-142.	1.2	2
59	Neutrino masses, dark energy and the gravitational lensing of pre-galactic H α . Monthly Notices of the Royal Astronomical Society, 2010, 401, 1999-2004.	4.4	2
60	Testing the reliability of fast methods for weak lensing simulations: wl-moka on pinocchio. Monthly Notices of the Royal Astronomical Society, 2020, 496, 1307-1324.	4.4	2
61	Small-Scale Structure, Missing Galaxies and Gravitational Lensing. Proceedings of the International Astronomical Union, 2004, 2004, 267-277.	0.0	0
62	The elliptical power law profile lens(Corrigendum). Astronomy and Astrophysics, 2016, 593, C2.	5.1	0