

Neal Katz

List of Publications by Year in descending order

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121
papers

19,996
citations

16451

64
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18130

120
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121
all docs

121
docs citations

121
times ranked

6689
citing authors

#	ARTICLE	IF	CITATIONS
1	The Optical and Near-Infrared Properties of Galaxies. I. Luminosity and Stellar Mass Functions. <i>Astrophysical Journal, Supplement Series</i> , 2003, 149, 289-312.	7.7	1,835
2	How do galaxies get their gas?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 363, 2-28.	4.4	1,796
3	Galaxy harassment and the evolution of clusters of galaxies. <i>Nature</i> , 1996, 379, 613-616.	27.8	1,403
4	TREESPH - A unification of SPH with the hierarchical tree method. <i>Astrophysical Journal, Supplement Series</i> , 1989, 70, 419.	7.7	822
5	Baryons in the Warm-Hot Intergalactic Medium. <i>Astrophysical Journal</i> , 2001, 552, 473-483.	4.5	675
6	Morphological Transformation from Galaxy Harassment. <i>Astrophysical Journal</i> , 1998, 495, 139-151.	4.5	667
7	Theoretical Models of the Halo Occupation Distribution: Separating Central and Satellite Galaxies. <i>Astrophysical Journal</i> , 2005, 633, 791-809.	4.5	652
8	Galaxies in a simulated Λ CDM Universe - I. Cold mode and hot cores. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 395, 160-179.	4.4	618
9	Star formation and feedback in smoothed particle hydrodynamic simulations - I. Isolated galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 373, 1074-1090.	4.4	614
10	THE COS-HALOS SURVEY: PHYSICAL CONDITIONS AND BARYONIC MASS IN THE LOW-REDSHIFT CIRCUMGALACTIC MEDIUM. <i>Astrophysical Journal</i> , 2014, 792, 8.	4.5	464
11	Dissipational galaxy formation. II - Effects of star formation. <i>Astrophysical Journal</i> , 1992, 391, 502.	4.5	462
12	The Low-Redshift Ly α Forest in Cold Dark Matter Cosmologies. <i>Astrophysical Journal</i> , 1999, 511, 521-545.	4.5	419
13	Feedback and recycled wind accretion: assembling the $z=0$ galaxy mass function. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 406, 2325-2338.	4.4	410
14	Toward a Precise Measurement of Matter Clustering: Ly α Forest Data at Redshifts $z \leq 4$. <i>Astrophysical Journal</i> , 2002, 581, 20-52.	4.5	352
15	The Opacity of the Ly α Forest and Implications for Γ band the Ionizing Background. <i>Astrophysical Journal</i> , 1997, 489, 7-20.	4.5	350
16	Recovery of the Power Spectrum of Mass Fluctuations from Observations of the Ly α Forest. <i>Astrophysical Journal</i> , 1998, 495, 44-62.	4.5	338
17	Hierarchical galaxy formation - Overmerging and the formation of an X-ray cluster. <i>Astrophysical Journal</i> , 1993, 412, 455.	4.5	311
18	The Halo Occupation Distribution and the Physics of Galaxy Formation. <i>Astrophysical Journal</i> , 2003, 593, 1-25.	4.5	307

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19	THE COS-HALOS SURVEY: RATIONALE, DESIGN, AND A CENSUS OF CIRCUMGALACTIC NEUTRAL HYDROGEN. <i>Astrophysical Journal</i> , 2013, 777, 59.	4.5	285
20	Dissipational galaxy formation. I - Effects of gasdynamics. <i>Astrophysical Journal</i> , 1991, 377, 365.	4.5	269
21	A BUDGET AND ACCOUNTING OF METALS AT $z \approx 0$: RESULTS FROM THE COS-HALOS SURVEY. <i>Astrophysical Journal</i> , 2014, 786, 54.	4.5	256
22	Cooling Radiation and the $L_{\text{Ly}\alpha}$ Luminosity of Forming Galaxies. <i>Astrophysical Journal</i> , 2001, 562, 605-617.	4.5	237
23	THE COS-DWARFS SURVEY: THE CARBON RESERVOIR AROUND SUB- L^* GALAXIES. <i>Astrophysical Journal</i> , 2014, 796, 136.	4.5	196
24	The Power Spectrum of Mass Fluctuations Measured from the $L_{\text{Ly}\alpha}$ Forest at Redshift $z \approx 2.5$. <i>Astrophysical Journal</i> , 1999, 520, 1-23.	4.5	193
25	Photoionization and the formation of dwarf galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 1996, 278, L49-L54.	4.4	187
26	Metal Enrichment of the Intergalactic Medium in Cosmological Simulations. <i>Astrophysical Journal</i> , 2001, 561, 521-549.	4.5	187
27	Bar-driven Dark Halo Evolution: A Resolution of the Cusp-Core Controversy. <i>Astrophysical Journal</i> , 2002, 580, 627-633.	4.5	182
28	Galaxies in a simulated Λ CDM universe - II. Observable properties and constraints on feedback. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 396, 2332-2344.	4.4	178
29	A Lower Bound on the Cosmic Baryon Density. <i>Astrophysical Journal</i> , 1997, 490, 564-570.	4.5	176
30	The neutral hydrogen content of galaxies in cosmological hydrodynamic simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 434, 2645-2663.	4.4	164
31	Galaxies and gas in a cold dark matter universe. <i>Astrophysical Journal</i> , 1992, 399, L109.	4.5	160
32	The Morphological Diversities among Star-forming Galaxies at High Redshifts in the Great Observatories Origins Deep Survey. <i>Astrophysical Journal</i> , 2006, 652, 963-980.	4.5	139
33	Photoionization, Numerical Resolution, and Galaxy Formation. <i>Astrophysical Journal</i> , 1997, 477, 8-20.	4.5	138
34	Metal Enrichment of the Intergalactic Medium at $z \approx 3$ by Galactic Winds. <i>Astrophysical Journal</i> , 2001, 560, 599-605.	4.5	137
35	A First Estimate of the Baryonic Mass Function of Galaxies. <i>Astrophysical Journal</i> , 2003, 585, L117-L120.	4.5	134
36	Tracing inflows and outflows with absorption lines in circumgalactic gas. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 444, 1260-1281.	4.4	131

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37	Ongoing assembly of massive galaxies by major merging in large groups and clusters from the SDSS. Monthly Notices of the Royal Astronomical Society, 2008, 388, 1537-1556.	4.4	129
38	Galaxy Merger Statistics and Inferred Bulge-to-Disk Ratios in Cosmological SPH Simulations. Astrophysical Journal, 2006, 647, 763-772.	4.5	128
39	The intergalactic medium over the last 10 billion years - I. Ly α absorption and physical conditions. Monthly Notices of the Royal Astronomical Society, 2010, 408, 2051-2070.	4.4	117
40	Structural properties of central galaxies in groups and clusters. Monthly Notices of the Royal Astronomical Society, 2009, 398, 1129-1149.	4.4	114
41	Galaxy Clustering and Galaxy Bias in a Λ CDM Universe. Astrophysical Journal, 2004, 601, 1-21.	4.5	109
42	Dissipationless collapse in an expanding universe. Astrophysical Journal, 1991, 368, 325.	4.5	109
43	The Growth of Galaxies in Cosmological Simulations of Structure Formation. Astrophysical Journal, 2002, 571, 1-14.	4.5	109
44	The Effects of Gasdynamics, Cooling, Star Formation, and Numerical Resolution in Simulations of Cluster Formation. Astrophysical Journal, 2000, 536, 623-644.	4.5	108
45	The intergalactic medium over the last 10 billion years - II. Metal-line absorption and physical conditions. Monthly Notices of the Royal Astronomical Society, 2012, 420, 829-859.	4.4	108
46	Voigt Profile Analysis of the Ly α Forest in a Cold Dark Matter Universe. Astrophysical Journal, 1997, 477, 21-26.	4.5	106
47	A Bayesian approach to the semi-analytic model of galaxy formation: methodology. Monthly Notices of the Royal Astronomical Society, 2011, 416, 1949-1964.	4.4	99
48	Hydrogen and metal line absorption around low-redshift galaxies in cosmological hydrodynamic simulations. Monthly Notices of the Royal Astronomical Society, 2013, 432, 89-112.	4.4	99
49	THE PHOTON UNDERPRODUCTION CRISIS. Astrophysical Journal Letters, 2014, 789, L32.	8.3	89
50	Intergalactic Helium Absorption in Cold Dark Matter Models. Astrophysical Journal, 1997, 488, 532-549.	4.5	83
51	Hydrodynamic Simulation of the Cosmological X-ray Background. Astrophysical Journal, 2001, 557, 67-87.	4.5	83
52	X-ray Scaling Relations of Galaxy Groups in a Hydrodynamic Cosmological Simulation. Astrophysical Journal, 2002, 579, 23-41.	4.5	82
53	A DEEP SEARCH FOR FAINT GALAXIES ASSOCIATED WITH VERY LOW REDSHIFT C IV ABSORBERS. III. THE MASS- AND ENVIRONMENT-DEPENDENT CIRCUMGALACTIC MEDIUM. Astrophysical Journal, 2016, 832, 124.	4.5	79
54	Pre-heating by pre-virialization and its impact on galaxy formation. Monthly Notices of the Royal Astronomical Society, 2005, 363, 1155-1166.	4.4	75

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55	Baryon Dynamics, Dark Matter Substructure, and Galaxies. <i>Astrophysical Journal</i> , 2008, 678, 6-21.	4.5	72
56	Interpreting the Relationship between Galaxy Luminosity, Color, and Environment. <i>Astrophysical Journal</i> , 2005, 629, 625-632.	4.5	69
57	Magnetohydrodynamic shocks in diffuse clouds. II - Production of CH(+), OH, CH, and other species. <i>Astrophysical Journal</i> , 1986, 310, 392.	4.5	68
58	The Population of Damped Ly α and Lyman Limit Systems in the Cold Dark Matter Model. <i>Astrophysical Journal</i> , 1997, 484, 31-39.	4.5	68
59	The Clustering of High-Redshift Galaxies in the Cold Dark Matter Scenario. <i>Astrophysical Journal</i> , 1999, 523, 463-479.	4.5	68
60	Simulations of Damped Ly α and Lyman Limit Absorbers in Different Cosmologies: Implications for Structure Formation at High Redshift. <i>Astrophysical Journal</i> , 2001, 559, 131-146.	4.5	67
61	Constraining the Metallicity of the Low-Density Ly α Forest Using OVI Absorption. <i>Astrophysical Journal</i> , 1998, 509, 661-677.	4.5	65
62	Probing Galaxy Formation with He II Cooling Lines. <i>Astrophysical Journal</i> , 2006, 640, 539-552.	4.5	65
63	Baryon cycling in the low-redshift circumgalactic medium: a comparison of simulations to the COS-Halos survey. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 459, 1745-1763.	4.4	65
64	From Galaxy-Galaxy Lensing to Cosmological Parameters. <i>Astrophysical Journal</i> , 2006, 652, 26-42.	4.5	64
65	The Formation of Quasars in Low-Luminosity Hosts via Galaxy Harassment. <i>Astrophysical Journal</i> , 1998, 495, 152-156.	4.5	64
66	Bayesian inference of galaxy formation from the K -band luminosity function of galaxies: tensions between theory and observation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 421, 1779-1796.	4.4	63
67	X-Ray Absorption by the Low-Redshift Intergalactic Medium: A Numerical Study of the Λ Cold Dark Matter Model. <i>Astrophysical Journal</i> , 2003, 594, 42-62.	4.5	62
68	TORQUE-LIMITED GROWTH OF MASSIVE BLACK HOLES IN GALAXIES ACROSS COSMIC TIME. <i>Astrophysical Journal</i> , 2015, 800, 127.	4.5	62
69	An empirical model for the star formation history in dark matter haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 439, 1294-1312.	4.4	61
70	The dynamics of tidal tails from massive satellites. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 381, 987-1000.	4.4	55
71	The COS Absorption Survey of Baryon Harbors (CASBaH): Warm-Hot Circumgalactic Gas Reservoirs Traced by Ne VIII Absorption. <i>Astrophysical Journal Letters</i> , 2019, 877, L20.	8.3	55
72	The growth of central and satellite galaxies in cosmological smoothed particle hydrodynamics simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 399, 650-662.	4.4	50

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73	The Galaxy Angular Correlation Functions and Power Spectrum from the Two Micron All Sky Survey. <i>Astrophysical Journal</i> , 2005, 619, 147-160.	4.5	49
74	Metal Lines Associated with Ly α Absorbers: A Comparison of Theory and Observations. <i>Astrophysical Journal</i> , 1997, 487, 482-488.	4.5	48
75	Lyman Break Galaxies and the Ly α Forest. <i>Astrophysical Journal</i> , 2003, 594, 75-96.	4.5	47
76	Testing subhalo abundance matching in cosmological smoothed particle hydrodynamics simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 423, 3458-3473.	4.4	47
77	nFTy galaxy cluster simulations â€“ II. Radiative models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 459, 2973-2991.	4.4	45
78	Testing Cosmological Models against the Abundance of Damped Lyman α Absorbers. <i>Astrophysical Journal</i> , 1997, 486, 42-47.	4.5	43
79	Enrichment of the Intergalactic Medium by Radiation Pressureâ€“driven Dust Efflux. <i>Astrophysical Journal</i> , 2001, 556, L11-L15.	4.5	43
80	Galaxy formation and the peaks formalism. <i>Monthly Notices of the Royal Astronomical Society</i> , 1993, 265, 689-705.	4.4	40
81	nFTy galaxy cluster simulations â€“ IV. Quantifying the influence of baryons on halo properties. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 458, 4052-4073.	4.4	39
82	Highâ€“Redshift Galaxies in Cold Dark Matter Models. <i>Astrophysical Journal</i> , 2002, 571, 15-29.	4.5	39
83	Star formation and stellar mass assembly in dark matter haloes: from giants to dwarfs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 450, 1604-1617.	4.4	38
84	Closing In on Ω_M : The Amplitude of Mass Fluctuations from Galaxy Clusters and the Ly α Forest. <i>Astrophysical Journal</i> , 1999, 522, 563-568.	4.5	36
85	The Clustering Dipole of the Local Universe from the Two Micron All Sky Survey. <i>Astrophysical Journal</i> , 2003, 598, L1-L5.	4.5	36
86	The dynamics of satellite disruption in cold dark matter haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 400, 1247-1263.	4.4	36
87	Bayesian inferences of galaxy formation from the K-band luminosity and H α mass functions of galaxies: constraining star formation and feedback. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 443, 1252-1266.	4.4	34
88	A DEEP SEARCH FOR FAINT GALAXIES ASSOCIATED WITH VERY LOW-REDSHIFT CIV ABSORBERS. II. PROGRAM DESIGN, ABSORPTION-LINE MEASUREMENTS, AND ABSORBER STATISTICS. <i>Astrophysical Journal</i> , 2015, 815, 91.	4.5	34
89	The growth and enrichment of intragroup gas. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 456, 4266-4290.	4.4	34
90	nFTY galaxy cluster simulations â€“ III. The similarity and diversity of galaxies and subhaloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 458, 1096-1116.	4.4	32

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91	THE HIGH-ION CONTENT AND KINEMATICS OF LOW-REDSHIFT LYMAN LIMIT SYSTEMS. <i>Astrophysical Journal</i> , 2013, 778, 187.	4.5	30
92	New insights into galaxy structure from galphat- I. Motivation, methodology and benchmarks for SA©rsic models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 414, 1625-1655.	4.4	29
93	The COS Absorption Survey of Baryon Harbors: unveiling the physical conditions of circumgalactic gas through multiphase Bayesian ionization modelling. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 502, 4993-5037.	4.4	29
94	The Observability of Metal Lines Associated with the Ly± Forest. <i>Astrophysical Journal</i> , 1998, 499, 172-180.	4.5	27
95	Simulation of Soft Xâ€Ray Emission Lines from the Missing Baryons. <i>Astrophysical Journal</i> , 2005, 623, 612-626.	4.5	26
96	THE NATURE OF RED DWARF GALAXIES. <i>Astrophysical Journal</i> , 2009, 697, 247-257.	4.5	24
97	Constraints on Cosmological Parameters from the Ly± Forest Power Spectrum and COBEDMR. <i>Astrophysical Journal</i> , 2001, 560, 15-27.	4.5	22
98	Cosmological Constraints from High-Redshift Damped L[CLC]y±[/CLC] Systems. <i>Astrophysical Journal</i> , 1997, 484, L1-L5.	4.5	22
99	Dark matter trapping by stellar bars: the shadow bar. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 463, 1952-1967.	4.4	21
100	Measuring the Halo Mass of 3 Damped Ly± Absorbers from the Absorberâ€Galaxy Crossâ€Correlation. <i>Astrophysical Journal</i> , 2005, 628, 89-103.	4.5	20
101	A new model for including galactic winds in simulations of galaxy formation â€ I. Introducing the Physically Evolved Winds (PhEW) model. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 497, 2586-2604.	4.4	19
102	Using torque to understand barred galaxy models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 490, 3616-3632.	4.4	17
103	Cooling and the longevity of polar rings. <i>Astrophysical Journal</i> , 1992, 389, L55.	4.5	17
104	High Molecular-gas to Dust Mass Ratios Predicted in Most Quiescent Galaxies. <i>Astrophysical Journal Letters</i> , 2021, 922, L30.	8.3	17
105	Nature and completeness of galaxies detected in the Two Micron All Sky Survey. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 373, 1321-1338.	4.4	16
106	nFTy galaxy cluster simulations â€ V. Investigation of the cluster infall region. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 464, 2027-2038.	4.4	16
107	Dynamical evolution of highly inclined rings. <i>Astrophysical Journal</i> , 1992, 395, 113.	4.5	16
108	Simulating the Effects of Intergalactic Gray Dust. <i>Astrophysical Journal</i> , 2000, 534, L123-L126.	4.5	13

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109	The robustness of cosmological hydrodynamic simulation predictions to changes in numerics and cooling physics. Monthly Notices of the Royal Astronomical Society, 2019, 484, 2021-2046.	4.4	12
110	Does the baryon fraction in clusters imply an open universe?. Astrophysical Journal, 1993, 406, L51.	4.5	10
111	$\langle \text{scp} \rangle \exp \langle / \text{scp} \rangle$: $\langle i \rangle N \langle / i \rangle$ -body integration using basis function expansions. Monthly Notices of the Royal Astronomical Society, 2022, 510, 6201-6217.	4.4	9
112	$\text{Ly}\alpha$ flux power spectrum and its covariance. Monthly Notices of the Royal Astronomical Society, 2005, 363, 1145-1154.	4.4	8
113	Comparing Simulations and Observations of the $\text{Ly}\alpha$ Forest. I. Methodology. Astrophysical Journal, 2002, 566, 30-50.	4.5	8
114	The influence of documentclass{aastex} usepackage{ambsy} usepackage{amsfonts} usepackage{amssymb} usepackage{bm} usepackage{mathrsfs} usepackage{pifont} usepackage{stmaryrd} usepackage{textcomp} usepackage[portland,xspace} usepackage{amsmath,amsxtra} usepackage[OT2,OT1]{fontenc} ewcommandcyr{enewcommandmdefault{wncyr} anewcommandsfdefault{wncyss} anewcommandencodingdefault{OT2} ormalfont selectfont} DeclareTextFontCommand{extcyr}.	4.5	7
115	The impact of wind scalings on stellar growth and the baryon cycle in cosmological simulations. Monthly Notices of the Royal Astronomical Society, 2020, 493, 1-28.	4.4	6
116	MAHGIC: a Model Adapter for the Haloâ€“Galaxy Inter-Connection. Monthly Notices of the Royal Astronomical Society, 2021, 507, 2510-2530.	4.4	6
117	On the Relationship between Cooling Flows and Bubbles. Astrophysical Journal, 2003, 587, L75-L78.	4.5	5
118	Aspects of hierarchical galaxy formation involving gas dynamics. Publications of the Astronomical Society of the Pacific, 1992, 104, 852.	3.1	4
119	Cosmological Simulations with Scaleâ€“Free Initial Conditions. I. Adiabatic Hydrodynamics. Astrophysical Journal, 1998, 503, 16-36.	4.5	3
120	Gravitational lensing by an ensemble of isothermal galaxies. Astrophysical Journal, 1987, 317, 11.	4.5	2
121	Looking at the Distant Universe with the MeerKAT Array: Discovery of a Luminous OH Megamaser at $z > 0.5$. Astrophysical Journal Letters, 2022, 931, L7.	8.3	2