Renu Malhotra

List of Publications by Year
in descending order

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93 papers	6,977 citations	57758 44 h-index	64796 79 g-index
96 all docs	96 docs citations	96 times ranked	3538 citing authors

#	Article	IF	Citations
1	The Origin of Pluto's Orbit: Implications for the Solar System Beyond Neptune. Astronomical Journal, 1995, 110, 420.	4.7	505
2	The Origin of Planetary Impactors in the Inner Solar System. Science, 2005, 309, 1847-1850.	12.6	397
3	The origin of Pluto's peculiar orbit. Nature, 1993, 365, 819-821.	27.8	394
4	The Size Distribution of Trans-Neptunian Bodies. Astronomical Journal, 2004, 128, 1364-1390.	4.7	384
5	Orbital Evolution of Planets Embedded in a Planetesimal Disk. Astronomical Journal, 1999, 117, 3041-3053.	4.7	309
6	Dynamics of the Uranian and Saturnian satelite systems: A chaotic route to melting Miranda?. Icarus, 1988, 76, 295-334.	2.5	178
7	Neptune's Migration into a Stirred-Up Kuiper Belt: A Detailed Comparison of Simulations to Observations. Astronomical Journal, 2005, 130, 2392-2414.	4.7	177
8	Long-Term Cycling of Kozai-Lidov Cycles: Extreme Eccentricities and Inclinations Excited by a Distant Eccentric Perturber. Physical Review Letters, 2011, 107, 181101.	7.8	173
9	Refining the Transit-timing and Photometric Analysis of TRAPPIST-1: Masses, Radii, Densities, Dynamics, and Ephemerides. Planetary Science Journal, 2021, 2, 1.	3.6	161
10	ASTEROID BELTS IN DEBRIS DISK TWINS: VEGA AND FOMALHAUT. Astrophysical Journal, 2013, 763, 118.	4.5	145
11	Dynamical erosion of the asteroid belt and implications for large impacts in the inner Solar System. Icarus, 2010, 207, 744-757.	2.5	144
12	A record of planet migration in the main asteroid belt. Nature, 2009, 457, 1109-1111.	27.8	143
13	Formation and Evolution of Planetary Systems: Upper Limits to the Gas Mass in Disks around Sunâ€like Stars. Astrophysical Journal, 2006, 651, 1177-1193.	4.5	142
14	The Galilean Satellites. Science, 1999, 286, 77-84.	12.6	141
15	The Dynamics of Known Centaurs. Astronomical Journal, 2003, 126, 3122-3131.	4.7	140
16	The Phase Space Structure Near Neptune Resonances in the Kuiper Belt. Astronomical Journal, 1996, 111, 504.	4.7	130
17	Tidal Evolution into the Laplace Resonance and the Resurfacing of Ganymede. Icarus, 1997, 127, 93-111.	2.5	123
18	Secular dynamics of the three-body problem: application to the Ï… Andromedae planetary system. Icarus, 2004, 168, 237-248.	2.5	120

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19	PLANETS NEAR MEAN-MOTION RESONANCES. Astrophysical Journal, 2013, 770, 24.	4.5	116
20	The Scattered Disk as the Source of the Jupiter Family Comets. Astrophysical Journal, 2008, 687, 714-725.	4.5	111
21	Coupled Orbital and Thermal Evolution of Ganymede. Icarus, 1997, 129, 367-383.	2.5	108
22	The Edge of the Solar System. Astrophysical Journal, 2001, 549, L241-L244.	4.5	104
23	A Study of the Dynamics of Dust from the Kuiper Belt: Spatial Distribution and Spectral Energy Distribution. Astronomical Journal, 2002, 124, 2305-2321.	4.7	101
24	Tidal origin of the Laplace resonance and the resurfacing of Ganymede. Icarus, 1991, 94, 399-412.	2.5	92
25	SECULAR RESONANCE SWEEPING OF THE MAIN ASTEROID BELT DURING PLANET MIGRATION. Astrophysical Journal, 2011, 732, 53.	4.5	90
26	The role of secondary resonances in the orbital history of Miranda. Icarus, 1990, 85, 444-480.	2.5	85
27	The Formation and Evolution of Planetary Systems: Placing Our Solar System in Context withSpitzer. Publications of the Astronomical Society of the Pacific, 2006, 118, 1690-1710.	3.1	80
28	A Dynamical Mechanism for Establishing Apsidal Resonance. Astrophysical Journal, 2002, 575, L33-L36.	4.5	74
29	Chaotic Exchange of Solid Material Between Planetary Systems: Implications for Lithopanspermia. Astrobiology, 2012, 12, 754-774.	3.0	74
30	CORRALLING A DISTANT PLANET WITH EXTREME RESONANT KUIPER BELT OBJECTS. Astrophysical Journal Letters, 2016, 824, L22.	8.3	72
31	Dynamical Models of Kuiper Belt Dust in the Inner and Outer Solar System. Astronomical Journal, 2003, 125, 2255-2265.	4.7	69
32	Are Debris Disks and Massive Planets Correlated?. Astrophysical Journal, 2007, 658, 1312-1321.	4.5	69
33	The Formation and Evolution of Planetary Systems: First Results from a Spitzer Legacy Science Program. Astrophysical Journal, Supplement Series, 2004, 154, 422-427.	7.7	67
34	LOCATING PLANETESIMAL BELTS IN THE MULTIPLE-PLANET SYSTEMS HD 128311, HD 202206, HD 82943, AND HR 8799. Astrophysical Journal, 2010, 717, 1123-1139.	4.5	64
35	The Ï... Andromedae System: Models and Stability. Astrophysical Journal, 2000, 545, 1044-1057.	4.5	63
36	Two dynamical classes of Centaurs. Icarus, 2009, 203, 155-163.	2.5	62

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37	PLANETARY CHAOTIC ZONE CLEARING: DESTINATIONS AND TIMESCALES. Astrophysical Journal, 2015, 799, 41.	4.5	58
38	DEBRIS DISTRIBUTION IN HD 95086â€"A YOUNG ANALOG OF HR 8799. Astrophysical Journal, 2015, 799, 146.	4.5	58
39	The inner solar system cratering record and the evolution of impactor populations. Research in Astronomy and Astrophysics, 2015, 15, 407-434.	1.7	58
40	Observational Limits on a Distant Cold Kuiper Belt. Astronomical Journal, 2002, 124, 2949-2954.	4.7	57
41	The Dust, Planetesimals, and Planets of HD 38529. Astrophysical Journal, 2007, 668, 1165-1173.	4.5	57
42	The Evolution of Dust Disk Sizes from a Homogeneous Analysis of 1â€"10 Myr old Stars. Astrophysical Journal, 2020, 895, 126.	4.5	57
43	Formation and Evolution of Planetary Systems: Cold Outer Disks Associated with Sunâ€like Stars. Astrophysical Journal, 2005, 632, 659-669.	4.5	56
44	ALMA 1.3 mm Map of the HD 95086 System. Astronomical Journal, 2017, 154, 225.	4.7	56
45	Do Centaurs preserve their source inclinations?. Icarus, 2013, 224, 66-73.	2.5	55
46	A mapping method for the gravitational few-body problem with dissipation. Celestial Mechanics and Dynamical Astronomy, 1994, 60, 373-385.	1.4	52
47	Depletion of the Outer Asteroid Belt. Science, 1997, 275, 375-377.	12.6	51
48	PREDICTIONS FOR SHEPHERDING PLANETS IN SCATTERED LIGHT IMAGES OF DEBRIS DISKS. Astrophysical Journal, 2014, 780, 65.	4.5	51
49	Assessing the Massive Young Sun Hypothesis to Solve the Warm Young Earth Puzzle. Astrophysical Journal, 2007, 660, 1700-1706.	4.5	49
50	CHAOTIC DIFFUSION OF RESONANT KUIPER BELT OBJECTS. Astronomical Journal, 2009, 138, 827-837.	4.7	48
51	Survival of Trojan-type companions of Neptune during primordial planet migration. Icarus, 2004, 167, 347-359.	2.5	47
52	Mean Motion Resonances at High Eccentricities: The 2:1 and the 3:2 Interior Resonances. Astronomical Journal, 2017, 154, 20.	4.7	46
53	The Curiously Warped Mean Plane of the Kuiper Belt. Astronomical Journal, 2017, 154, 62.	4.7	45
54	Orbital Resonances in the Solar Nebula: Strengths and Weaknesses. Icarus, 1993, 106, 264-273.	2.5	42

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55	Dust Outflows and Inner Gaps Generated by Massive Planets in Debris Disks. Astrophysical Journal, 2005, 633, 1150-1167.	4.5	36
56	THE MASS DISTRIBUTION FUNCTION OF PLANETS. Astrophysical Journal, 2015, 808, 71.	4.5	36
57	INCLINATION MIXING IN THE CLASSICAL KUIPER BELT. Astrophysical Journal, 2011, 736, 11.	4.5	32
58	Prospects for the Habitability of OGLE-2006-BLG-109L. Astrophysical Journal, 2008, 683, L67-L70.	4.5	30
59	A Disk-driven Resonance as the Origin of High Inclinations of Close-in Planets. Astrophysical Journal Letters, 2020, 902, L5.	8.3	30
60	Signatures of Planets in Spatially Unresolved Debris Disks. Astrophysical Journal, 2005, 621, 1079-1097.	4.5	29
61	The current impact flux on Mars and its seasonal variation. Icarus, 2015, 262, 140-153.	2.5	28
62	Dynamical transport of asteroid fragments from the Î½6 resonance. Advances in Space Research, 2006, 38, 817-825.	2.6	27
63	Neptune's 5:2 Resonance in the Kuiper Belt. Astronomical Journal, 2018, 156, 55.	4.7	26
64	Capture probabilities for secondary resonances. Icarus, 1990, 87, 249-264.	2.5	25
65	Neptuneâ€™s resonances in the scattered disk. Celestial Mechanics and Dynamical Astronomy, 2019, 131, 1.	1.4	25
66	Not a Simple Relationship between Neptuneâ€™s Migration Speed and Kuiper Belt Inclination Excitation. Astronomical Journal, 2019, 158, 64.	4.7	24
67	Extreme Debris Disk Variability: Exploring the Diverse Outcomes of Large Asteroid Impacts During the Era of Terrestrial Planet Formation. Astronomical Journal, 2019, 157, 202.	4.7	23
68	The effect of orbital evolution on the Haumea (2003 EL61) collisional family. Icarus, 2012, 221, 106-115.	2.5	21
69	Photometric Observations of a Very Young Family-Member Asteroid (832) Karin. Publication of the Astronomical Society of Japan, 2004, 56, 1105-1113.	2.5	20
70	Resonant Kuiper belt objects: a review. Geoscience Letters, 2019, 6, 12.	3.3	19
71	Dynamical Instabilities in Systems of Multiple Short-period Planets Are Likely Driven by Secular Chaos: A Case Study of Kepler-102. Astronomical Journal, 2020, 160, 98.	4.7	18
72	Search for L5 Earth Trojans with DECam. Monthly Notices of the Royal Astronomical Society, 2020, 492, 6105-6119.	4.4	17

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73	On the non-uniform distribution of the angular elements of near-Earth objects. Icarus, 2014, 229, 236-246.	2.5	16
74	Assessing and minimizing collisions in satellite mega-constellations. Advances in Space Research, 2021, 67, 3755-3774.	2.6	16
75	Nonlinear resonances in the solar system. Physica D: Nonlinear Phenomena, 1994, 77, 289-304.	2.8	14
76	Simplified Derivation of the Collision Probability of Two Objects in Independent Keplerian Orbits. Astronomical Journal, 2017, 153, 235.	4.7	14
77	Chaos and stability of the solar system. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 12342-12343.	7.1	13
78	Observational Completion Limit of Minor Planets from the Asteroid Belt to Jupiter Trojans. Planetary Science Journal, 2020, 1, 75.	3.6	11
79	Comment on â€œConstraints on the source of lunar cataclysm impactorsâ€•(Cuk et al., 2010, Icarus 207,) Tj ETQq1 1 0.784314 rgBT	2.5	9
80	On the divergence of first-order resonance widths at low eccentricities. Monthly Notices of the Royal Astronomical Society, 2020, 496, 3152-3160.	4.4	9
81	Lunar-like silicate material forms the Earth quasi-satellite (469219) 2016 HO3 KamoÊ»oalewa. Communications Earth & Environment, 2021, 2, .	6.8	9
82	Eccentricity distribution in the main asteroid belt. Monthly Notices of the Royal Astronomical Society, 2017, 465, 4381-4389.	4.4	8
83	Chaotic planet formation. Nature, 1999, 402, 599-600.	27.8	6
84	The Mid-plane of the Main Asteroid Belt. Astronomical Journal, 2018, 155, 143.	4.7	6
85	On the Detectability of Planet X with LSST. Astronomical Journal, 2018, 155, 243.	4.7	4
86	Pluto near the edge of chaos. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2118692119.	7.1	4
87	Lunar close encounters compete with the circumterrestrial Lidovâ€“Kozai effect. Celestial Mechanics and Dynamical Astronomy, 2020, 132, 1.	1.4	3
88	An Integrative Analysis of the HD 219134 Planetary System and the Inner solar system: Extending DYNAMITE with Enhanced Orbital Dynamical Stability Criteria. Astronomical Journal, 2022, 163, 88.	4.7	3
89	Lightcurves of the Karin family asteroids. Icarus, 2016, 269, 15-22.	2.5	2
90	Plutoâ€™s Resonant Orbit Visualized in 4D. Research Notes of the AAS, 2021, 5, 235.	0.7	1

#	Article	IF	Citations
91	New results on orbital resonances. Proceedings of the International Astronomical Union, 2021, 15, 85-101.	0.0	1
92	SIZE DISTRIBUTION OF ASTEROIDS AND OLD TERRESTRIAL CRATERS: IMPLICATIONS FOR ASTEROIDAL DYNAMICS DURING LHB. , 2006, , 337-343.		0
93	COMMISSION 7: CELESTIAL MECHANICS AND DYNAMICAL ASTRONOMY. Proceedings of the International Astronomical Union, 2008, 4, 12-22.	0.0	0