Ryan Park

List of Publications by Year
in descending order

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74 papers	4,524 citations	117625 34 h-index	102487 66 g-index
82 all docs	82 docs citations	82 times ranked	3521 citing authors

#	Article	IF	Citations
1	Dawn at Vesta: Testing the Protoplanetary Paradigm. Science, 2012, 336, 684-686.	12.6	422
2	Gravity Field of the Moon from the Gravity Recovery and Interior Laboratory (GRAIL) Mission. Science, 2013, 339, 668-671.	12.6	389
3	The NANOGrav 11 Year Data Set: Pulsar-timing Constraints on the Stochastic Gravitational-wave Background. Astrophysical Journal, 2018, 859, 47.	4.5	331
4	Lunar interior properties from the GRAIL mission. Journal of Geophysical Research E: Planets, 2014, 119, 1546-1578.	3.6	185
5	Dawn arrives at Ceres: Exploration of a small, volatile-rich world. Science, 2016, 353, 1008-1010.	12.6	178
6	The JPL Planetary and Lunar Ephemerides DE440 and DE441. Astronomical Journal, 2021, 161, 105.	4.7	177
7	A partially differentiated interior for (1) Ceres deduced from its gravity field and shape. Nature, 2016, 537, 515-517.	27.8	169
8	Nonlinear Mapping of Gaussian Statistics: Theory and Applications to Spacecraft Trajectory Design. Journal of Guidance, Control, and Dynamics, 2006, 29, 1367-1375.	2.8	164
9	The JPL lunar gravity field to spherical harmonic degree 660 from the GRAIL Primary Mission. Journal of Geophysical Research E: Planets, 2013, 118, 1415-1434.	3.6	143
10	Cratering on Ceres: Implications for its crust and evolution. Science, 2016, 353, .	12.6	135
11	An improved JPL Mars gravity field and orientation from Mars orbiter and lander tracking data. Icarus, 2016, 274, 253-260.	2.5	134
12	Precession of Mercuryâ€™s Perihelion from Ranging to the MESSENGER Spacecraft. Astronomical Journal, 2017, 153, 121.	4.7	134
13	Composition and structure of the shallow subsurface of Ceres revealed by craterÂmorphology. Nature Geoscience, 2016, 9, 538-542.	12.9	118
14	Constraints on Ceres' Internal Structure and Evolution From Its Shape and Gravity Measured by the Dawn Spacecraft. Journal of Geophysical Research E: Planets, 2017, 122, 2267-2293.	3.6	117
15	The interior structure of Ceres as revealed by surface topography. Earth and Planetary Science Letters, 2017, 476, 153-164.	4.4	117
16	Highâ€resolution lunar gravity fields from the GRAIL Primary and Extended Missions. Geophysical Research Letters, 2014, 41, 1452-1458.	4.0	103
17	The Vesta gravity field, spin pole and rotation period, landmark positions, and ephemeris from the Dawn tracking and optical data. Icarus, 2014, 240, 103-117.	2.5	98
18	Resonance locking in giant planets indicated by the rapid orbital expansion of Titan. Nature Astronomy, 2020, 4, 1053-1058.	10.1	87

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19	Jupiter gravity field estimated from the first two Juno orbits. Geophysical Research Letters, 2017, 44, 4694-4700.	4.0	74
20	The Ceres gravity field, spin pole, rotation period and orbit from the Dawn radiometric tracking and optical data. Icarus, 2018, 299, 411-429.	2.5	65
21	The Dawn Gravity Investigation at Vesta and Ceres. Space Science Reviews, 2011, 163, 461-486.	8.1	62
22	Observations, Meteorites, and Models: A Preflight Assessment of the Composition and Formation of (16) Psyche. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006296.	3.6	61
23	Nonlinear Semi-Analytic Methods for Trajectory Estimation. Journal of Guidance, Control, and Dynamics, 2007, 30, 1668-1676.	2.8	60
24	Estimating Small-Body Gravity Field from Shape Model and Navigation Data. Journal of Guidance, Control, and Dynamics, 2010, 33, 212-221.	2.8	54
25	High-resolution shape model of Ceres from stereophotoclinometry using Dawn Imaging Data. Icarus, 2019, 319, 812-827.	2.5	51
26	Trajectory Estimation for Particles Observed in the Vicinity of (101955) Bennu. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006363.	3.6	51
27	Heterogeneous mass distribution of the rubble-pile asteroid (101955) Bennu. Science Advances, 2020, 6, .	10.3	50
28	Impact-driven mobilization of deep crustal brines on dwarf planet Ceres. Nature Astronomy, 2020, 4, 741-747.	10.1	50
29	Modeling the Uncertainties of Solar System Ephemerides for Robust Gravitational-wave Searches with Pulsar-timing Arrays. Astrophysical Journal, 2020, 893, 112.	4.5	49
30	Gravity field expansion in ellipsoidal harmonic and polyhedral internal representations applied to Vesta. Icarus, 2014, 240, 118-132.	2.5	48
31	SURFACE ALBEDO AND SPECTRAL VARIABILITY OF CERES. Astrophysical Journal Letters, 2016, 817, L22.	8.3	42
32	New constraints on Mars rotation determined from radiometric tracking of the Opportunity Mars Exploration Rover. Icarus, 2014, 229, 340-347.	2.5	41
33	Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory Mission. Science, 2016, 354, 438-441.	12.6	38
34	Detection of the Chandler Wobble of Mars From Orbiting Spacecraft. Geophysical Research Letters, 2020, 47, e2020GL090568.	4.0	37
35	The Scientific Measurement System of the Gravity Recovery and Interior Laboratory (GRAIL) Mission. Space Science Reviews, 2013, 178, 25-55.	8.1	32
36	The Mercury gravity field, orientation, love number, and ephemeris from the MESSENGER radiometric tracking data. Icarus, 2020, 335, 113386.	2.5	30

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37	Evidence of non-uniform crust of Ceres from Dawnâ€™s high-resolution gravity data. Nature Astronomy, 2020, 4, 748-755.	10.1	30
38	The central pit and dome at Cerealia Facula bright deposit and floor deposits in Occator crater, Ceres: Morphology, comparisons and formation. Icarus, 2019, 320, 159-187.	2.5	28
39	Ephemeris and hazard assessment for near-Earth asteroid (101955) Bennu based on OSIRIS-REx data. Icarus, 2021, 369, 114594.	2.5	28
40	Photometry of Particles Ejected From Active Asteroid (101955) Bennu. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006381.	3.6	23
41	Gravity Recovery and Interior Laboratory Simulations of Static and Temporal Gravity Field. Journal of Spacecraft and Rockets, 2012, 49, 390-400.	1.9	22
42	Power Laws of Topography and Gravity Spectra of the Solar System Bodies. Journal of Geophysical Research E: Planets, 2018, 123, 2038-2064.	3.6	21
43	Tectonic analysis of fracturing associated with occator crater. Icarus, 2019, 320, 49-59.	2.5	21
44	Harmonic and statistical analyses of the gravity and topography of Vesta. Icarus, 2014, 240, 161-173.	2.5	18
45	Improved detection of tides at Europa with radiometric and optical tracking during flybys. Planetary and Space Science, 2015, 112, 10-14.	1.7	17
46	Breakthrough Listen Observations of 1I/â€²Oumuamua with the GBT. Research Notes of the AAS, 2018, 2, 9.	0.7	17
47	Detecting tides and gravity at Europa from multiple close flybys. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	16
48	Morphological Indicators of a Mascon Beneath Ceres's Largest Crater, Kerwan. Geophysical Research Letters, 2018, 45, 1297-1304.	4.0	15
49	A Recipe for the Geophysical Exploration of Enceladus. Planetary Science Journal, 2021, 2, 157.	3.6	14
50	The rotational elements of Mars and its satellites. Planetary and Space Science, 2018, 152, 107-115.	1.7	13
51	Floorâ€Fractured Craters on Ceres and Implications for Interior Processes. Journal of Geophysical Research E: Planets, 2018, 123, 3188-3204.	3.6	13
52	Distinguishing the Origin of Asteroid (16) Psyche. Space Science Reviews, 2022, 218, 17.	8.1	13
53	Surface Roughness and Gravitational Slope Distributions of Vesta and Ceres. Journal of Geophysical Research E: Planets, 2019, 124, 14-30.	3.6	12
54	VERY LONG BASELINE ARRAY ASTROMETRIC OBSERVATIONS OF MARS ORBITERS. Astronomical Journal, 2015, 150, 121.	4.7	11

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55	Search for OH 18 cm Radio Emission from 1I/2017 U1 with the Green Bank Telescope. Astronomical Journal, 2018, 155, 185.	4.7	11
56	Advanced Pointing Imaging Camera (APIC) for planetary science and mission opportunities. Planetary and Space Science, 2020, 194, 105095.	1.7	10
57	Estimating Parameterized Post-Newtonian Parameters from Spacecraft Radiometric Tracking Data. Journal of Spacecraft and Rockets, 2005, 42, 559-568.	1.9	9
58	Ganymede's Ionosphere Observed by a Dualâ€Frequency Radio Occultation With Juno. Geophysical Research Letters, 2022, 49, .	4.0	9
59	Deflection of spacecraft trajectories as a new test of general relativity: Determining the parametrized post-Newtonian parametersÎ²andÎ³. Physical Review D, 2004, 69, .	4.7	8
60	The geology of the Nawish quadrangle of Ceres: The rim of an ancient basin. Icarus, 2018, 316, 114-127.	2.5	6
61	Performance of Earth Troposphere Calibration Measurements With the Advanced Water Vapor Radiometer for the Juno Gravity Science Investigation. Radio Science, 2021, 56, .	1.6	6
62	Psyche Science Operations Concept: Maximize Reuse to Minimize Risk. , 2018, , .		5
63	The Deep-space Positioning System Concept: Automating Complex Navigation Operations Beyond the Earth. , 2016, , .		4
64	The Psyche Topography and Geomorphology Investigation. Space Science Reviews, 2022, 218, 1.	8.1	4
65	Determining the Relative Cratering Ages of Regions of Psycheâ€™s Surface. Space Science Reviews, 2022, 218, 1.	8.1	4
66	Reduced Nonlinear Model for Orbit Uncertainty Propagation and Estimation. Journal of Guidance, Control, and Dynamics, 2021, 44, 1578-1592.	2.8	3
67	The Dawn Gravity Investigation at Vesta and Ceres. , 2011, , 461-486.		3
68	Trajectory Reconstruction of a Sounding Rocket Using Intertial Measurement Unit and Landmark Data. Journal of Spacecraft and Rockets, 2010, 47, 1003-1009.	1.9	2
69	Estimating Asteroid Mass from Optically Tracked Radio Beacons. Journal of Spacecraft and Rockets, 2021, 58, 444-455.	1.9	2
70	Replenishment of Nearâ€Surface Water Ice by Impacts Into Ceres' Volatileâ€Rich Crust: Observations by Dawn's Gamma Ray and Neutron Detector. Geophysical Research Letters, 2021, 48, e2021GL094223.	4.0	2
71	Recoverability of Known Near-Earth Asteroids. Astronomical Journal, 2020, 160, 250.	4.7	2
72	The First Two Years of juno Spacecraft Astrometry with the Very Long Baseline Array. , 2019, , .		1

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73	Efficient method for approximating nonlinear dynamics: applications to uncertainty propagation and estimation. , 2020, , .		1
74	Nonlinear Semi-Analytic Methods for Spacecraft Trajectory Design, Control, and Navigation. AIP Conference Proceedings, 2007, , .	0.4	0