Frank G Lemoine

List of Publications by Year
in descending order

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96 papers	12,023 citations	38742 50 h-index	39675 94 g-index
98 all docs	98 docs citations	98 times ranked	6490 citing authors

#	Article	IF	Citations
1	Mars Orbiter Laser Altimeter: Experiment summary after the first year of global mapping of Mars. Journal of Geophysical Research, 2001, 106, 23689-23722.	3.3	1,344
2	The Global Topography of Mars and Implications for Surface Evolution. Science, 1999, 284, 1495-1503.	12.6	826
3	The Crust of the Moon as Seen by GRAIL. Science, 2013, 339, 671-675.	12.6	726
4	Internal Structure and Early Thermal Evolution of Mars from Mars Global Surveyor Topography and Gravity. Science, 2000, 287, 1788-1793.	12.6	518
5	The Development of the NASA GSFC and NIMA Joint Geopotential Model. International Association of Geodesy Symposia, 1997, , 461-469.	0.4	398
6	Gravity Field of the Moon from the Gravity Recovery and Interior Laboratory (GRAIL) Mission. Science, 2013, 339, 668-671.	12.6	389
7	Crustal structure of Mars from gravity and topography. Journal of Geophysical Research, 2004, 109, .	3.3	360
8	Initial observations from the Lunar Orbiter Laser Altimeter (LOLA). Geophysical Research Letters, 2010, 37, .	4.0	356
9	The Shape and Internal Structure of the Moon from the Clementine Mission. Science, 1994, 266, 1839-1843.	12.6	349
10	Recent Greenland Ice Mass Loss by Drainage System from Satellite Gravity Observations. Science, 2006, 314, 1286-1289.	12.6	345
11	Accuracy assessment of global barotropic ocean tide models. Reviews of Geophysics, 2014, 52, 243-282.	23.0	338
12	Gravity Field and Internal Structure of Mercury from MESSENGER. Science, 2012, 336, 214-217.	12.6	305
13	Topography of the Moon from the Clementine lidar. Journal of Geophysical Research, 1997, 102, 1591-1611.	3.3	246
14	An improved solution of the gravity field of Mars (GMM-2B) from Mars Global Surveyor. Journal of Geophysical Research, 2001, 106, 23359-23376.	3.3	227
15	Topography of the Northern Hemisphere of Mercury from MESSENGER Laser Altimetry. Science, 2012, 336, 217-220.	12.6	223
16	The curious case of Mercury's internal structure. Journal of Geophysical Research E: Planets, 2013, 118, 1204-1220.	3.6	210
17	The lunar crust: Global structure and signature of major basins. Journal of Geophysical Research, 1996, 101, 16841-16863.	3.3	206
18	Lunar interior properties from the GRAIL mission. Journal of Geophysical Research E: Planets, 2014, 119, 1546-1578.	3.6	185

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19	Ancient Igneous Intrusions and Early Expansion of the Moon Revealed by GRAIL Gravity Gradiometry. Science, 2013, 339, 675-678.	12.6	177
20	Lunar impact basins revealed by Gravity Recovery and Interior Laboratory measurements. Science Advances, 2015, 1, e1500852.	10.3	173
21	Seasonal and static gravity field of Mars from MGS, Mars Odyssey and MRO radio science. Icarus, 2016, 272, 228-245.	2.5	172
22	The Shape of 433 Eros from the NEAR-Shoemaker Laser Rangefinder. Science, 2000, 289, 2097-2101.	12.6	171
23	GRGM900C: A degree 900 lunar gravity model from GRAIL primary and extended mission data. Geophysical Research Letters, 2014, 41, 3382-3389.	4.0	152
24	Crossover analysis of Mars Orbiter Laser Altimeter data. Journal of Geophysical Research, 2001, 106, 23753-23768.	3.3	145
25	A reassessment of global and regional mean sea level trends from TOPEX and Jasonâ€1 altimetry based on revised reference frame and orbits. Geophysical Research Letters, 2007, 34, .	4.0	140
26	The International DORIS Service (IDS): Toward maturity. Advances in Space Research, 2010, 45, 1408-1420.	2.6	135
27	The 1-Centimeter Orbit: Jason-1 Precision Orbit Determination Using GPS, SLR, DORIS, and Altimeter Data Special Issue: Jason-1 Calibration/Validation. Marine Geodesy, 2003, 26, 399-421.	2.0	134
28	The Gravity Field of Mars: Results from Mars Global Surveyor. Science, 1999, 286, 94-97.	12.6	127
29	Precision Orbit Determination Standards for the Jason Series of Altimeter Missions. Marine Geodesy, 2010, 33, 379-418.	2.0	120
30	Orbit determination of the Lunar Reconnaissance Orbiter. Journal of Geodesy, 2012, 86, 193-207.	3.6	117
31	Summary of the results from the lunar orbiter laser altimeter after seven years in lunar orbit. Icarus, 2017, 283, 70-91.	2.5	116
32	Highâ€'degree gravity models from GRAIL primary mission data. Journal of Geophysical Research E: Planets, 2013, 118, 1676-1698.	3.6	114
33	The gravity field, orientation, and ephemeris of Mercury from MESSENGER observations after three years in orbit. Journal of Geophysical Research E: Planets, 2014, 119, 2417-2436.	3.6	110
34	Global mass flux solutions from GRACE: A comparison of parameter estimation strategiesâ€"Mass concentrations versus Stokes coefficients. Journal of Geophysical Research, 2010, 115, .	3.3	109
35	The ILRS: approaching 20Âyears and planning for the future. Journal of Geodesy, 2019, 93, 2161-2180.	3.6	105
36	Constraints on energy dissipation in the Earth's body tide from satellite tracking and altimetry. Geophysical Journal International, 2001, 144, 471-480.	2.4	99

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37	Density of Mars' South Polar Layered Deposits. Science, 2007, 317, 1718-1719.	12.6	94
38	Monthly spherical harmonic gravity field solutions determined from GRACE inter-satellite range-rate data alone. Geophysical Research Letters, 2006, 33, .	4.0	93
39	An improved lunar gravity field model from SELENE and historical tracking data: Revealing the farside gravity features. Journal of Geophysical Research, 2010, 115, .	3.3	92
40	An improved gravity model for Mars: Goddard Mars model 1. Journal of Geophysical Research, 1993, 98, 20871-20889.	3.3	81
41	Solar system expansion and strong equivalence principle as seen by the NASA MESSENGER mission. Nature Communications, 2018, 9, 289.	12.8	81
42	Geodetic Evidence That Mercury Has A Solid Inner Core. Geophysical Research Letters, 2019, 46, 3625-3633.	4.0	80
43	Solar Rotation Effects on the Thermospheres of Mars and Earth. Science, 2006, 312, 1366-1368.	12.6	77
44	Assessment of the Jason-2 Extension to the TOPEX/Poseidon, Jason-1 Sea-Surface Height Time Series for Global Mean Sea Level Monitoring. Marine Geodesy, 2010, 33, 447-471.	2.0	74
45	Towards the 1mm/y stability of the radial orbit error at regional scales. Advances in Space Research, 2015, 55, 2-23.	2.6	74
46	Solar flux variability of Mars' exosphere densities and temperatures. Geophysical Research Letters, 2008, 35, .	4.0	69
47	Lunar gravity field determination using SELENE same-beam differential VLBI tracking data. Journal of Geodesy, 2011, 85, 205-228.	3.6	63
48	Design considerations for a dedicated gravity recovery satellite mission consisting of two pairs of satellites. Journal of Geodesy, 2012, 86, 81-98.	3.6	60
49	The use of laser altimetry in the orbit and attitude determination of Mars Global Surveyor. Geophysical Research Letters, 1999, 26, 1191-1194.	4.0	57
50	Short-arc analysis of intersatellite tracking data in a gravity mapping mission. Journal of Geodesy, 2002, 76, 307-316.	3.6	57
51	The International DORIS Service contribution to the 2014 realization of the International Terrestrial Reference Frame. Advances in Space Research, 2016, 58, 2479-2504.	2.6	50
52	DORIS/SLR POD modeling improvements for Jason-1 and Jason-2. Advances in Space Research, 2010, 46, 1541-1558.	2.6	45
53	Laser Altimeter Observations from MESSENGER's First Mercury Flyby. Science, 2008, 321, 77-79.	12.6	44
54	The equatorial shape and gravity field of Mercury from MESSENGER flybys 1 and 2. Icarus, 2010, 209, 88-100.	2.5	43

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55	GLGMâ€3: A degreeâ€150 lunar gravity model from the historical tracking data of NASA Moon orbiters. Journal of Geophysical Research, 2010, 115, .	3.3	42
56	Mars Reconnaissance Orbiter Radio Science Gravity Investigation. Journal of Geophysical Research, 2007, 112, .	3.3	39
57	Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory Mission. Science, 2016, 354, 438-441.	12.6	38
58	Highâ€Resolution Gravity Field Models from GRAIL Data and Implications for Models of the Density Structure of the Moon's Crust. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006086.	3.6	38
59	New high-resolution model developed for earth's gravitational field. Eos, 1998, 79, 113-113.	0.1	34
60	Small-scale density variations in the lunar crust revealed by GRAIL. Icarus, 2017, 291, 107-123.	2.5	34
61	IDS contribution to ITRF2008. Advances in Space Research, 2010, 46, 1614-1632.	2.6	29
62	Ice mass change in Greenland and Antarctica between 1993 and 2013 from satellite gravity measurements. Journal of Geodesy, 2017, 91, 1283-1298.	3.6	29
63	Simultaneous estimation of the masses of Mars, Phobos, and Deimos using spacecraft distant encounters. Geophysical Research Letters, 1995, 22, 2171-2174.	4.0	28
64	Orbit determination of the SELENE satellites using multi-satellite data types and evaluation of SELENE gravity field models. Journal of Geodesy, 2011, 85, 487-504.	3.6	26
65	Gravitational and topographic isotropy of the Earth, Moon, Mars, and Venus. Journal of Geophysical Research, 1995, 100, 26275.	3.3	25
66	A simulation study of multi-beam altimetry for lunar reconnaissance orbiter and other planetary missions. Journal of Geodesy, 2009, 83, 709-721.	3.6	25
67	Time variations of Mars' gravitational field and seasonal changes in the masses of the polar ice caps. Journal of Geophysical Research, 2009, 114, .	3.3	25
68	DORIS time bias estimated using Jason-1, TOPEX/Poseidon and ENVISAT orbits. Journal of Geodesy, 2006, 80, 497-506.	3.6	24
69	A preliminary semiempirical thermosphere model of Mars: DTM-Mars. Journal of Geophysical Research, 2002, 107, 15-1.	3.3	22
70	Effects of Self-Shadowing on Nonconservative Force Modeling for Mars-Orbiting Spacecraft. Journal of Spacecraft and Rockets, 2009, 46, 662-669.	1.9	22
71	External Evaluation of the Terrestrial Reference Frame: Report of the Task Force of the IAG Sub-commission 1.2. International Association of Geodesy Symposia, 2014, , 197-202.	0.4	20
72	Impact of ITRS 2014 realizations on altimeter satellite precise orbit determination. Advances in Space Research, 2018, 61, 45-73.	2.6	20

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73	Improved nearside gravity field of the Moon by localizing the power law constraint. Geophysical Research Letters, 2009, 36, .	4.0	19
74	The use of mascons to resolve time-variable gravity from GRACE. , 2007, , 231-236.		18
75	Localized analysis of satellite tracking data for studying timeâ€variable Earth's gravity fields. Journal of Geophysical Research, 2008, 113, .	3.3	18
76	Martian exospheric density using Mars Odyssey radio tracking data. Journal of Geophysical Research, 2007, 112, .	3.3	17
77	Observation of atmospheric tides in the Martian exosphere using Mars Reconnaissance Orbiter radio tracking data. Geophysical Research Letters, 2008, 35, .	4.0	17
78	Density structure of the upper thermosphere of Mars from measurements of air drag on the Mars Global Surveyor spacecraft. Journal of Geophysical Research, 2001, 106, 23349-23357.	3.3	15
79	Estimated SLR station position and network frame sensitivity to time-varying gravity. Journal of Geodesy, 2014, 88, 517-537.	3.6	15
80	DPOD2014: A new DORIS extension of ITRF2014 for precise orbit determination. Advances in Space Research, 2019, 63, 118-138.	2.6	15
81	Satellite Altimetry and GRACE Gravimetry for Studies of Annual Water Storage Variations in Bangladesh. Terrestrial, Atmospheric and Oceanic Sciences, 2008, 19, 47.	0.6	14
82	Highâ€resolution local gravity model of the south pole of the Moon from GRAIL extended mission data. Geophysical Research Letters, 2014, 41, 3367-3374.	4.0	12
83	The International DORIS Service (IDS): Recent Developments in Preparation for ITRF2013. International Association of Geodesy Symposia, 2015, , 631-640.	0.4	10
84	First two-way laser ranging to a lunar orbiter: infrared observations from the Grasse station to LROâ€™s retro-reflector array. Earth, Planets and Space, 2020, 72, .	2.5	10
85	The international DORIS service contribution to ITRF2020. Advances in Space Research, 2023, 72, 65-91.	2.6	10
86	Atmospheric Density During the Aerobraking of Mars Odyssey from Radio Tracking Data. Journal of Spacecraft and Rockets, 2007, 44, 1165-1171.	1.9	9
87	Modernizing and expanding the NASA Space Geodesy Network to meet future geodetic requirements. Journal of Geodesy, 2019, 93, 2263-2273.	3.6	9
88	Impact of Jason-2/T2L2 Ultra-Stable-Oscillator Frequency Model on DORIS stations coordinates and Earth Orientation Parameters. Advances in Space Research, 2021, 67, 930-944.	2.6	8
89	Towards the 1-cm SARAL orbit. Advances in Space Research, 2016, 58, 2651-2676.	2.6	7
90	Reduction of crossover errors in the earth gravity model (EGM) 96. Marine Geodesy, 1998, 21, 219-239.	2.0	4

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91	The effect of seasonal and long-period geopotential variations on the GPS orbits. GPS Solutions, 2014, 18, 497-507.	4.3	4
92	Long-term variability of CO₂and O in the Mars upper atmosphere from MRO radio science data. Journal of Geophysical Research E: Planets, 2015, 120, 849-868.	3.6	4
93	Satellite Drag Variability at Earth, Mars, and Venus due to Solar Rotation. Journal of Spacecraft and Rockets, 2007, 44, 1160-1164.	1.9	3
94	GGOS Working Group on Ground Networks Communications. , 2007, , 719-726.		3
95	Looking for systematic error in scale from terrestrial reference frames derived from DORIS data. , 2007, , 143-151.		3
96	High Degree and Order Spherical Harmonic Models for the Moon From Clementine and Historic S-Band Data. International Association of Geodesy Symposia, 1996, , 176-185.	0.4	1