

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	The international DORIS service contribution to ITRF2020. <i>Advances in Space Research</i> , 2023, 72, 65-91.	2.6	10
2	Impact of Jason-2/T2L2 Ultra-Stable-Oscillator Frequency Model on DORIS stations coordinates and Earth Orientation Parameters. <i>Advances in Space Research</i> , 2021, 67, 930-944.	2.6	8
3	High-Resolution Gravity Field Models from GRAIL Data and Implications for Models of the Density Structure of the Moon's Crust. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006086.	3.6	38
4	First two-way laser ranging to a lunar orbiter: infrared observations from the Grasse station to LRO's retro-reflector array. <i>Earth, Planets and Space</i> , 2020, 72, .	2.5	10
5	Geodetic Evidence That Mercury Has A Solid Inner Core. <i>Geophysical Research Letters</i> , 2019, 46, 3625-3633.	4.0	80
6	The ILRS: approaching 20 years and planning for the future. <i>Journal of Geodesy</i> , 2019, 93, 2161-2180.	3.6	105
7	DPOD2014: A new DORIS extension of ITRF2014 for precise orbit determination. <i>Advances in Space Research</i> , 2019, 63, 118-138.	2.6	15
8	Modernizing and expanding the NASA Space Geodesy Network to meet future geodetic requirements. <i>Journal of Geodesy</i> , 2019, 93, 2263-2273.	3.6	9
9	Solar system expansion and strong equivalence principle as seen by the NASA MESSENGER mission. <i>Nature Communications</i> , 2018, 9, 289.	12.8	81
10	Impact of ITRS 2014 realizations on altimeter satellite precise orbit determination. <i>Advances in Space Research</i> , 2018, 61, 45-73.	2.6	20
11	Small-scale density variations in the lunar crust revealed by GRAIL. <i>Icarus</i> , 2017, 291, 107-123.	2.5	34
12	Ice mass change in Greenland and Antarctica between 1993 and 2013 from satellite gravity measurements. <i>Journal of Geodesy</i> , 2017, 91, 1283-1298.	3.6	29
13	Summary of the results from the lunar orbiter laser altimeter after seven years in lunar orbit. <i>Icarus</i> , 2017, 283, 70-91.	2.5	116
14	Gravity field of the Orientale basin from the Gravity Recovery and Interior Laboratory Mission. <i>Science</i> , 2016, 354, 438-441.	12.6	38
15	Towards the 1-cm SARAL orbit. <i>Advances in Space Research</i> , 2016, 58, 2651-2676.	2.6	7
16	Seasonal and static gravity field of Mars from MGS, Mars Odyssey and MRO radio science. <i>Icarus</i> , 2016, 272, 228-245.	2.5	172
17	The International DORIS Service contribution to the 2014 realization of the International Terrestrial Reference Frame. <i>Advances in Space Research</i> , 2016, 58, 2479-2504.	2.6	50
18	Long-term variability of CO ₂ and O in the Mars upper atmosphere from MRO radio science data. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 849-868.	3.6	4

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19	Lunar impact basins revealed by Gravity Recovery and Interior Laboratory measurements. <i>Science Advances</i> , 2015, 1, e1500852.	10.3	173
20	The International DORIS Service (IDS): Recent Developments in Preparation for ITRF2013. <i>International Association of Geodesy Symposia</i> , 2015, , 631-640.	0.4	10
21	Towards the 1mm/y stability of the radial orbit error at regional scales. <i>Advances in Space Research</i> , 2015, 55, 2-23.	2.6	74
22	Accuracy assessment of global barotropic ocean tide models. <i>Reviews of Geophysics</i> , 2014, 52, 243-282.	23.0	338
23	External Evaluation of the Terrestrial Reference Frame: Report of the Task Force of the IAG Sub-commission 1.2. <i>International Association of Geodesy Symposia</i> , 2014, , 197-202.	0.4	20
24	The effect of seasonal and long-period geopotential variations on the GPS orbits. <i>GPS Solutions</i> , 2014, 18, 497-507.	4.3	4
25	Estimated SLR station position and network frame sensitivity to time-varying gravity. <i>Journal of Geodesy</i> , 2014, 88, 517-537.	3.6	15
26	The gravity field, orientation, and ephemeris of Mercury from MESSENGER observations after three years in orbit. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2417-2436.	3.6	110
27	Lunar interior properties from the GRAIL mission. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1546-1578.	3.6	185
28	High-resolution local gravity model of the south pole of the Moon from GRAIL extended mission data. <i>Geophysical Research Letters</i> , 2014, 41, 3367-3374.	4.0	12
29	GRGM900C: A degree 900 lunar gravity model from GRAIL primary and extended mission data. <i>Geophysical Research Letters</i> , 2014, 41, 3382-3389.	4.0	152
30	Ancient Igneous Intrusions and Early Expansion of the Moon Revealed by GRAIL Gravity Gradiometry. <i>Science</i> , 2013, 339, 675-678.	12.6	177
31	Gravity Field of the Moon from the Gravity Recovery and Interior Laboratory (GRAIL) Mission. <i>Science</i> , 2013, 339, 668-671.	12.6	389
32	The Crust of the Moon as Seen by GRAIL. <i>Science</i> , 2013, 339, 671-675.	12.6	726
33	High-degree gravity models from GRAIL primary mission data. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1676-1698.	3.6	114
34	The curious case of Mercury's internal structure. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1204-1220.	3.6	210
35	Gravity Field and Internal Structure of Mercury from MESSENGER. <i>Science</i> , 2012, 336, 214-217.	12.6	305
36	Topography of the Northern Hemisphere of Mercury from MESSENGER Laser Altimetry. <i>Science</i> , 2012, 336, 217-220.	12.6	223

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37	Design considerations for a dedicated gravity recovery satellite mission consisting of two pairs of satellites. <i>Journal of Geodesy</i> , 2012, 86, 81-98.	3.6	60
38	Orbit determination of the Lunar Reconnaissance Orbiter. <i>Journal of Geodesy</i> , 2012, 86, 193-207.	3.6	117
39	Lunar gravity field determination using SELENE same-beam differential VLBI tracking data. <i>Journal of Geodesy</i> , 2011, 85, 205-228.	3.6	63
40	Orbit determination of the SELENE satellites using multi-satellite data types and evaluation of SELENE gravity field models. <i>Journal of Geodesy</i> , 2011, 85, 487-504.	3.6	26
41	The International DORIS Service (IDS): Toward maturity. <i>Advances in Space Research</i> , 2010, 45, 1408-1420.	2.6	135
42	IDS contribution to ITRF2008. <i>Advances in Space Research</i> , 2010, 46, 1614-1632.	2.6	29
43	The equatorial shape and gravity field of Mercury from MESSENGER flybys 1 and 2. <i>Icarus</i> , 2010, 209, 88-100.	2.5	43
44	DORIS/SLR POD modeling improvements for Jason-1 and Jason-2. <i>Advances in Space Research</i> , 2010, 46, 1541-1558.	2.6	45
45	Global mass flux solutions from GRACE: A comparison of parameter estimation strategies" Mass concentrations versus Stokes coefficients. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	109
46	GLGM"3: A degree"150 lunar gravity model from the historical tracking data of NASA Moon orbiters. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	42
47	An improved lunar gravity field model from SELENE and historical tracking data: Revealing the farside gravity features. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	92
48	Initial observations from the Lunar Orbiter Laser Altimeter (LOLA). <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	356
49	Assessment of the Jason-2 Extension to the TOPEX/Poseidon, Jason-1 Sea-Surface Height Time Series for Global Mean Sea Level Monitoring. <i>Marine Geodesy</i> , 2010, 33, 447-471.	2.0	74
50	Precision Orbit Determination Standards for the Jason Series of Altimeter Missions. <i>Marine Geodesy</i> , 2010, 33, 379-418.	2.0	120
51	A simulation study of multi-beam altimetry for lunar reconnaissance orbiter and other planetary missions. <i>Journal of Geodesy</i> , 2009, 83, 709-721.	3.6	25
52	Improved nearside gravity field of the Moon by localizing the power law constraint. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	19
53	Effects of Self-Shadowing on Nonconservative Force Modeling for Mars-Orbiting Spacecraft. <i>Journal of Spacecraft and Rockets</i> , 2009, 46, 662-669.	1.9	22
54	Time variations of Mars' gravitational field and seasonal changes in the masses of the polar ice caps. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	25

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55	Solar flux variability of Mars' exosphere densities and temperatures. Geophysical Research Letters, 2008, 35, .	4.0	69
56	Localized analysis of satellite tracking data for studying time-variable Earth's gravity fields. Journal of Geophysical Research, 2008, 113, .	3.3	18
57	Observation of atmospheric tides in the Martian exosphere using Mars Reconnaissance Orbiter radio tracking data. Geophysical Research Letters, 2008, 35, .	4.0	17
58	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
59	Laser Altimeter Observations from MESSENGER's First Mercury Flyby. Science, 2008, 321, 77-79.	12.6	44
60	Atmospheric Density During the Aerobraking of Mars Odyssey from Radio Tracking Data. Journal of Spacecraft and Rockets, 2007, 44, 1165-1171.	1.9	9
61	Satellite Drag Variability at Earth, Mars, and Venus due to Solar Rotation. Journal of Spacecraft and Rockets, 2007, 44, 1160-1164.	1.9	3
62	Density of Mars' South Polar Layered Deposits. Science, 2007, 317, 1718-1719.	12.6	94
63	Mars Reconnaissance Orbiter Radio Science Gravity Investigation. Journal of Geophysical Research, 2007, 112, .	3.3	39
64	Martian exospheric density using Mars Odyssey radio tracking data. Journal of Geophysical Research, 2007, 112, .	3.3	17
65	A reassessment of global and regional mean sea level trends from TOPEX and Jason-1 altimetry based on revised reference frame and orbits. Geophysical Research Letters, 2007, 34, .	4.0	140
66	The use of mascons to resolve time-variable gravity from GRACE. , 2007, , 231-236.		18
67	GGOS Working Group on Ground Networks Communications. , 2007, , 719-726.		3
68	Looking for systematic error in scale from terrestrial reference frames derived from DORIS data. , 2007, , 143-151.		3
69	Monthly spherical harmonic gravity field solutions determined from GRACE inter-satellite range-rate data alone. Geophysical Research Letters, 2006, 33, .	4.0	93
70	DORIS time bias estimated using Jason-1, TOPEX/Poseidon and ENVISAT orbits. Journal of Geodesy, 2006, 80, 497-506.	3.6	24
71	Solar Rotation Effects on the Thermospheres of Mars and Earth. Science, 2006, 312, 1366-1368.	12.6	77
72	Recent Greenland Ice Mass Loss by Drainage System from Satellite Gravity Observations. Science, 2006, 314, 1286-1289.	12.6	345

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73	Crustal structure of Mars from gravity and topography. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	360
74	The 1-Centimeter Orbit: Jason-1 Precision Orbit Determination Using GPS, SLR, DORIS, and Altimeter Data Special Issue: Jason-1 Calibration/Validation. <i>Marine Geodesy</i> , 2003, 26, 399-421.	2.0	134
75	A preliminary semiempirical thermosphere model of Mars: DTM-Mars. <i>Journal of Geophysical Research</i> , 2002, 107, 15-1.	3.3	22
76	Short-arc analysis of intersatellite tracking data in a gravity mapping mission. <i>Journal of Geodesy</i> , 2002, 76, 307-316.	3.6	57
77	Mars Orbiter Laser Altimeter: Experiment summary after the first year of global mapping of Mars. <i>Journal of Geophysical Research</i> , 2001, 106, 23689-23722.	3.3	1,344
78	Crossover analysis of Mars Orbiter Laser Altimeter data. <i>Journal of Geophysical Research</i> , 2001, 106, 23753-23768.	3.3	145
79	Density structure of the upper thermosphere of Mars from measurements of air drag on the Mars Global Surveyor spacecraft. <i>Journal of Geophysical Research</i> , 2001, 106, 23349-23357.	3.3	15
80	An improved solution of the gravity field of Mars (GMM-2B) from Mars Global Surveyor. <i>Journal of Geophysical Research</i> , 2001, 106, 23359-23376.	3.3	227
81	Constraints on energy dissipation in the Earth's body tide from satellite tracking and altimetry. <i>Geophysical Journal International</i> , 2001, 144, 471-480.	2.4	99
82	Internal Structure and Early Thermal Evolution of Mars from Mars Global Surveyor Topography and Gravity. <i>Science</i> , 2000, 287, 1788-1793.	12.6	518
83	The Shape of 433 Eros from the NEAR-Shoemaker Laser Rangefinder. <i>Science</i> , 2000, 289, 2097-2101.	12.6	171
84	The Global Topography of Mars and Implications for Surface Evolution. <i>Science</i> , 1999, 284, 1495-1503.	12.6	826
85	The Gravity Field of Mars: Results from Mars Global Surveyor. <i>Science</i> , 1999, 286, 94-97.	12.6	127
86	The use of laser altimetry in the orbit and attitude determination of Mars Global Surveyor. <i>Geophysical Research Letters</i> , 1999, 26, 1191-1194.	4.0	57
87	Reduction of crossover errors in the earth gravity model (EGM) 96. <i>Marine Geodesy</i> , 1998, 21, 219-239.	2.0	4
88	New high-resolution model developed for earth's gravitational field. <i>Eos</i> , 1998, 79, 113-113.	0.1	34
89	The Development of the NASA GSFC and NIMA Joint Geopotential Model. <i>International Association of Geodesy Symposia</i> , 1997, , 461-469.	0.4	398
90	Topography of the Moon from the Clementine lidar. <i>Journal of Geophysical Research</i> , 1997, 102, 1591-1611.	3.3	246

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91	The lunar crust: Global structure and signature of major basins. Journal of Geophysical Research, 1996, 101, 16841-16863.	3.3	206
92	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
93	Simultaneous estimation of the masses of Mars, Phobos, and Deimos using spacecraft distant encounters. Geophysical Research Letters, 1995, 22, 2171-2174.	4.0	28
94	Gravitational and topographic isotropy of the Earth, Moon, Mars, and Venus. Journal of Geophysical Research, 1995, 100, 26275.	3.3	25
95	The Shape and Internal Structure of the Moon from the Clementine Mission. Science, 1994, 266, 1839-1843.	12.6	349
96	An improved gravity model for Mars: Goddard Mars model 1. Journal of Geophysical Research, 1993, 98, 20871-20889.	3.3	81