Matthew P Golombeck

List of Publications by Year
in descending order

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123 papers	12,288 citations	20759 60 h-index	24915 109 g-index
133 all docs	133 docs citations	133 times ranked	4302 citing authors

#	Article	IF	Citations
1	Seismic constraints from a Mars impact experiment using InSight and Perseverance. Nature Astronomy, 2022, 6, 59-64.	4.2	9
2	Degradation at theInSightLanding Site,Homestead Hollow, Mars: Constraints From Rock Heights and Shapes. Earth and Space Science, 2022, 9, .	1.1	3
3	The InSight-HP3 mole on Mars: Lessons learned from attempts to penetrate to depth in the Martian soil. Advances in Space Research, 2022, 69, 3140-3163.	1.2	24
4	In Situ and Orbital Stratigraphic Characterization of the InSight Landing Siteâ€"A Type Example of a Regolithâ€Covered Lava Plain on Mars. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	17
5	InSight Constraints on the Global Character of the Martian Crust. Journal of Geophysical Research E: Planets, 2022, 127, .	1.5	45
6	Evidence for crustal seismic anisotropy at the InSight lander site. Earth and Planetary Science Letters, 2022, 593, 117654.	1.8	21
7	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 2: Local Meteorology, Transport Dynamics, and Model Analysis. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006514.	1.5	19
8	Analyzing Low Frequency Seismic Events at Cerberus Fossae as Long Period Volcanic Quakes. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006518.	1.5	19
9	Finding SEIS North on Mars: Comparisons Between SEIS Sundial, Inertial and Imaging Measurements and Consequences for Seismic Analysis. Earth and Space Science, 2021, 8, e2020EA001286.	1.1	3
10	Color Properties at the Mars InSight Landing Site. Earth and Space Science, 2021, 8, e2020EA001336.	1.1	3
11	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multiâ€Instrument Observations, Analysis, and Implications. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006757.	1.5	23
12	Thermal Conductivity of the Martian Soil at the InSight Landing Site From HP³ Active Heating Experiments. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006861.	1.5	23
13	Near Surface Properties of Martian Regolith Derived From InSight HP³â€RAD Temperature Observations During Phobos Transits. Geophysical Research Letters, 2021, 48, e2021GL093542.	1.5	13
14	Soil Thermophysical Properties Near the InSight Lander Derived From 50 Sols of Radiometer Measurements. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006859.	1.5	22
15	Geology and Geochemistry of Noachian Bedrock and Alteration Events, Meridiani Planum, Mars: MER Opportunity Observations. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006915.	1.5	6
16	The shallow structure of Mars at the InSight landing site from inversion of ambient vibrations. Nature Communications, 2021, 12, 6756.	5.8	40
17	Rock Sizeâ€Frequency Distributions at the InSight Landing Site, Mars. Earth and Space Science, 2021, 8, .	1.1	12
18	Questions to Heaven. Astronomy and Geophysics, 2021, 62, 6.22-6.25.	0.1	2

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19	Location and Setting of the Mars InSight Lander, Instruments, and Landing Site. Earth and Space Science, 2020, 7, e2020EA001248.	1.1	34
20	Crater Morphometry on the Mafic Floor Unit at Jezero Crater, Mars: Comparisons to a Known Basaltic Lava Plain at the InSight Landing Site. Geophysical Research Letters, 2020, 47, e2020GL089607.	1.5	11
21	Comparison of InSightHomesteadHollow to Hollows at the Spirit Landing Site. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006435.	1.5	10
22	An Impact Crater Origin for the InSight Landing Site at Homestead Hollow, Mars: Implications for Near Surface Stratigraphy, Surface Processes, and Erosion Rates. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006333.	1.5	24
23	Assessment of InSight Landing Site Predictions. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006502.	1.5	32
24	Degradation of Homestead Hollow at the InSight Landing Site Based on the Distribution and Properties of Local Deposits. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006350.	1.5	20
25	Geology of the InSight landing site on Mars. Nature Communications, 2020, 11, 1014.	5.8	107
26	The atmosphere of Mars as observed by InSight. Nature Geoscience, 2020, 13, 190-198.	5.4	161
27	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	5.4	207
28	Crustal and time-varying magnetic fields at the InSight landing site on Mars. Nature Geoscience, 2020, 13, 199-204.	5.4	68
29	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	5.4	274
30	SEIS: Insightâ€™s Seismic Experiment for Internal Structure of Mars. Space Science Reviews, 2019, 215, 12.	3.7	238
31	Degradation of Endeavour Crater Based on Orbital and Roverâ€Based Observations in Combination With Landscape Evolution Modeling. Journal of Geophysical Research E: Planets, 2019, 124, 1472-1494.	1.5	3
32	Recently Formed Crater Clusters on Mars. Journal of Geophysical Research E: Planets, 2019, 124, 958-969.	1.5	15
33	Image and Data Processing for InSight Lander Operations and Science. Space Science Reviews, 2019, 215, 1.	3.7	22
34	Pre-mission InSights on the Interior of Mars. Space Science Reviews, 2019, 215, 1.	3.7	85
35	GEOLOGY OF THE INSIGHT LANDING SITE, MARS. , 2019, , .		2
36	AN IMPACT ORIGIN FOR HOMESTEAD HOLLOW, THE LANDING LOCATION OF THE INSIGHT LANDER ON MARS. , 2019, , .		4

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37	SURFACE ALTERATION FROM LANDING INSIGHT ON MARS AND ITS IMPLICATIONS FOR SHALLOW REGOLITH STRUCTURE. , 2019, , .		5
38	EOLIAN BEDFORMS IN THE REGION SURROUNDING THE INSIGHT LANDING SITE, MARS. , 2019, , .		1
39	AEOLIAN CHANGE DETECTION FROM THE INSIGHT LANDER. , 2019, , .		1
40	MODIFICATION OF HOMESTEAD HOLLOW AT THE INSIGHT LANDING SITE. , 2019, , .		1
41	Areally Extensive Surface Bedrock Exposures on Mars: Many Are Clastic Rocks, Not Lavas. Geophysical Research Letters, 2018, 45, 1767-1777.	1.5	68
42	Presentâ€Day Mars' Seismicity Predicted From 3â€D Thermal Evolution Models of Interior Dynamics. Geophysical Research Letters, 2018, 45, 2580-2589.	1.5	35
43	The Marsquake Service: Securing Daily Analysis of SEIS Data and Building the Martian Seismicity Catalogue for InSight. Space Science Reviews, 2018, 214, 1.	3.7	41
44	Impact-Seismic Investigations of the InSight Mission. Space Science Reviews, 2018, 214, 1.	3.7	48
45	Atmospheric Science with InSight. Space Science Reviews, 2018, 214, 1.	3.7	88
46	The Color Cameras on the InSight Lander. Space Science Reviews, 2018, 214, 1.	3.7	50
47	Degradation of 100â€mâ€Scale Rocky Ejecta Craters at the InSight Landing Site on Mars and Implications for Surface Processes and Erosion Rates in the Hesperian and Amazonian. Journal of Geophysical Research E: Planets, 2018, 123, 2732-2759.	1.5	27
48	Geology and Physical Properties Investigations by the InSight Lander. Space Science Reviews, 2018, 214, 1.	3.7	77
49	Influence of Body Waves, Instrumentation Resonances, and Prior Assumptions on Rayleigh Wave Ellipticity Inversion for Shallow Structure at the InSight Landing Site. Space Science Reviews, 2018, 214, 1.	3.7	10
50	The science process for selecting the landing site for the 2020 Mars rover. Planetary and Space Science, 2018, 164, 106-126.	0.9	64
51	The Rotation and Interior Structure Experiment on the InSight Mission to Mars. Space Science Reviews, 2018, 214, 1.	3.7	64
52	Selection of the InSight Landing Site. Space Science Reviews, 2017, 211, 5-95.	3.7	150
53	Rayleigh Wave Ellipticity Modeling and Inversion for Shallow Structure at the Proposed InSight Landing Site in Elysium Planitia, Mars. Space Science Reviews, 2017, 211, 339-382.	3.7	31
54	Planned Products of the Mars Structure Service for the InSight Mission to Mars. Space Science Reviews, 2017, 211, 611-650.	3.7	80

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55	Radar-Derived Properties of the InSight Landing Site in Western Elysium Planitia on Mars. Space Science Reviews, 2017, 211, 135-146.	3.7	9
56	Preparing for InSight: An Invitation to Participate in a Blind Test for Martian Seismicity. Seismological Research Letters, 2017, 88, 1290-1302.	0.8	37
57	Modeling of Ground Deformation and Shallow Surface Waves Generated by Martian Dust Devils and Perspectives for Near-Surface Structure Inversion. Space Science Reviews, 2017, 211, 501-524.	3.7	49
58	Near Surface Stratigraphy and Regolith Production in Southwestern Elysium Planitia, Mars: Implications for Hesperian-Amazonian Terrains and the InSight Lander Mission. Space Science Reviews, 2017, 211, 147-190.	3.7	57
59	Analysis of Local Slopes at the InSight Landing Site on Mars. Space Science Reviews, 2017, 211, 109-133.	3.7	21
60	High concentrations of manganese and sulfur in deposits on Murray Ridge, Endeavour Crater, Mars. American Mineralogist, 2016, 101, 1389-1405.	0.9	55
61	Characteristics of terrestrial basaltic rock populations: Implications for Mars lander and rover science and safety. Icarus, 2016, 274, 50-72.	1.1	17
62	Context of ancient aqueous environments on Mars from in situ geologic mapping at Endeavour Crater. Journal of Geophysical Research E: Planets, 2015, 120, 538-569.	1.5	37
63	Ancient Aqueous Environments at Endeavour Crater, Mars. Science, 2014, 343, 1248097.	6.0	176
64	Small crater modification on Meridiani Planum and implications for erosion rates and climate change on Mars. Journal of Geophysical Research E: Planets, 2014, 119, 2522-2547.	1.5	80
65	Planet-wide sand motion on Mars. Geology, 2012, 40, 31-34.	2.0	136
66	Surface Properties of the Mars Science Laboratory Candidate Landing Sites: Characterization from Orbit and Predictions. Space Science Reviews, 2012, 170, 739-773.	3.7	37
67	Selection of the Mars Science Laboratory Landing Site. Space Science Reviews, 2012, 170, 641-737.	3.7	216
68	Opportunity Mars Rover mission: Overview and selected results from Purgatory ripple to traverses to Endeavour crater. Journal of Geophysical Research, 2011, 116, .	3.3	106
69	Constraints on ripple migration at Meridiani Planum from Opportunity and HiRISE observations of fresh craters. Journal of Geophysical Research, 2010, 115, .	3.3	73
70	Event and conditions that produced the iron meteorite Block Island on Mars. Journal of Geophysical Research, 2010, 115, .	3.3	8
71	Gone with the wind: Eolian erasure of the Mars Rover tracks. Journal of Geophysical Research, 2010, 115, .	3.3	40
72	Exploration of Victoria Crater by the Mars Rover Opportunity. Science, 2009, 324, 1058-1061.	6.0	141

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73	Mars tectonics. , 2009, , 183-232.		13
74	Centers of tectonic activity in the eastern hemisphere of Mars. Icarus, 2008, 195, 537-546.	1.1	30
75	Mars Exploration Program 2007 Phoenix landing site selection and characteristics. Journal of Geophysical Research, 2008, 113, .	3.3	64
76	Sizeâ€frequency distributions of rocks on the northern plains of Mars with special reference to Phoenix landing surfaces. Journal of Geophysical Research, 2008, 113, .	3.3	70
77	Windâ€driven particle mobility on Mars: Insights from Mars Exploration Rover observations at â€œEl Doradoâ€•and surroundings at Gusev Crater. Journal of Geophysical Research, 2008, 113, .	3.3	255
78	Degradation of Victoria crater, Mars. Journal of Geophysical Research, 2008, 113, .	3.3	44
79	In situ observations of the physical properties of the Martian surface. , 2008, , 451-467.		33
80	Martian surface properties from joint analysis of orbital, Earth-based, and surface observations. , 2008, , 468-498.		35
81	Overview of the Opportunity Mars Exploration Rover Mission to Meridiani Planum: Eagle Crater to Purgatory Ripple. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	149
82	Crater gradation in Gusev crater and Meridiani Planum, Mars. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	63
83	Characterization and petrologic interpretation of olivine-rich basalts at Gusev Crater, Mars. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	227
84	Overview of the Spirit Mars Exploration Rover Mission to Gusev Crater: Landing site to Backstay Rock in the Columbia Hills. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	238
85	Geology of the Gusev cratered plains from the Spirit rover transverse. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	114
86	Physical properties of the Mars Exploration Rover landing sites as inferred from Mini-TES-derived thermal inertia. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	128
87	Distribution of rocks on the Gusev Plains and on Husband Hill, Mars. Geophysical Research Letters, 2006, 33, .	1.5	50
88	Nature and origin of the hematite-bearing plains of Terra Meridiani based on analyses of orbital and Mars Exploration rover data sets. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	144
89	Erosion rates at the Mars Exploration Rover landing sites and long-term climate change on Mars. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	215
90	Active dust devils in Gusev crater, Mars: Observations from the Mars Exploration Rover Spirit. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	133

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91	Sedimentary textures formed by aqueous processes, Erebus crater, Meridiani Planum, Mars. Geology, 2006, 34, 1085.	2.0	84
92	Two Years at Meridiani Planum: Results from the Opportunity Rover. Science, 2006, 313, 1403-1407.	6.0	188
93	The rayed crater Zunil and interpretations of small impact craters on Mars. Icarus, 2005, 176, 351-381.	1.1	335
94	Aeolian processes at the Mars Exploration Rover Meridiani Planum landing site. Nature, 2005, 436, 58-61.	13.7	233
95	Assessment of Mars Exploration Rover landing site predictions. Nature, 2005, 436, 44-48.	13.7	101
96	Stratigraphy and sedimentology of a dry to wet eolian depositional system, Burns formation, Meridiani Planum, Mars. Earth and Planetary Science Letters, 2005, 240, 11-72.	1.8	496
97	The size-frequency and areal distribution of rock clasts at the Spirit landing site, Gusev Crater, Mars. Geophysical Research Letters, 2005, 32, .	1.5	24
98	Soils of Eagle Crater and Meridiani Planum at the Opportunity Rover Landing Site. Science, 2004, 306, 1723-1726.	6.0	153
99	Pancam Multispectral Imaging Results from the Spirit Rover at Gusev Crater. Science, 2004, 305, 800-806.	6.0	153
100	Surficial Deposits at Gusev Crater Along Spirit Rover Traverses. Science, 2004, 305, 807-810.	6.0	82
101	Localization and Physical Property Experiments Conducted by Opportunity at Meridiani Planum. Science, 2004, 306, 1730-1733.	6.0	130
102	Localization and Physical Properties Experiments Conducted by Spirit at Gusev Crater. Science, 2004, 305, 821-824.	6.0	166
103	The Spirit Rover's Athena Science Investigation at Gusev Crater, Mars. Science, 2004, 305, 794-799.	6.0	404
104	COMPRESSIONAL STRUCTURES ON MARS. Annual Review of Earth and Planetary Sciences, 2004, 32, 435-464.	4.6	110
105	Rock size-frequency distributions on Mars and implications for Mars Exploration Rover landing safety and operations. Journal of Geophysical Research, 2003, 108, .	3.3	117
106	Selection of the Mars Exploration Rover landing sites. Journal of Geophysical Research, 2003, 108, .	3.3	155
107	Analysis of MOLA data for the Mars Exploration Rover landing sites. Journal of Geophysical Research, 2003, 108, .	3.3	25
108	PLANETARY SCIENCE: The Surface of Mars: Not Just Dust and Rocks. Science, 2003, 300, 2043-2044.	6.0	7

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109	Rock size-frequency distributions on Mars and implications for Mars Exploration Rover landing safety and operations. , 2003, .		1
110	Primary centers and secondary concentrations of tectonic activity through time in the western hemisphere of Mars. Journal of Geophysical Research, 2001, 106, 20563-20585.	3.3	294
111	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
112	Ancient Geodynamics and Global-Scale Hydrology on Mars. Science, 2001, 291, 2587-2591.	6.0	453
113	Erosion rates on Mars and implications for climate change: Constraints from the Pathfinder landing site. Journal of Geophysical Research, 2000, 105, 1841-1853.	3.3	163
114	Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder. Journal of Geophysical Research, 2000, 105, 1721-1755.	3.3	274
115	Results of the Imager for Mars Pathfinder windsock experiment. Journal of Geophysical Research, 2000, 105, 24547-24562.	3.3	96
116	MARTIAN CLIMATE:A Message from Warmer Times. Science, 1999, 283, 1470-1471.	6.0	25
117	Overview of the Mars Pathfinder Mission: Launch through landing, surface operations, data sets, and science results. Journal of Geophysical Research, 1999, 104, 8523-8553.	3.3	121
118	Assessment of Mars Pathfinder landing site predictions. Journal of Geophysical Research, 1999, 104, 8585-8594.	3.3	56
119	Overview of the Mars Pathfinder Mission and Assessment of Landing Site Predictions. Science, 1997, 278, 1743-1748.	6.0	268
120	Selection of the Mars Pathfinder landing site. Journal of Geophysical Research, 1997, 102, 3967-3988.	3.3	91
121	Size-frequency distributions of rocks on Mars and Earth analog sites: Implications for future landed missions. Journal of Geophysical Research, 1997, 102, 4117-4129.	3.3	151
122	A Prediction of Mars Seismicity from Surface Faulting. Science, 1992, 258, 979-981.	6.0	84
123	Tectonic evolution of Mars. Journal of Geophysical Research, 1979, 84, 7934-7939.	3.3	136