

Sue Smrekar

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

120
papers

5,106
citations

42
h-index

68
g-index

135
ext. papers

6,260
ext. citations

8.5
avg, IF

5.33
L-index

#	Paper	IF	Citations
120	Mars high resolution gravity fields from MRO, Mars seasonal gravity, and other dynamical parameters. <i>Icarus</i> , 2011 , 211, 401-428	3.8	266
119	Mars north polar deposits: stratigraphy, age, and geodynamical response. <i>Science</i> , 2008 , 320, 1182-5	33.3	232
118	Venus tectonics: An overview of Magellan observations. <i>Journal of Geophysical Research</i> , 1992 , 97, 13199		219
117	SHARAD sounding radar on the Mars Reconnaissance Orbiter. <i>Journal of Geophysical Research</i> , 2007 , 112,		200
116	Recent hotspot volcanism on Venus from VIRTIS emissivity data. <i>Science</i> , 2010 , 328, 605-8	33.3	181
115	Massive CO ₂ ice deposits sequestered in the south polar layered deposits of Mars. <i>Science</i> , 2011 , 332, 838-41	33.3	176
114	Initial results from the InSight mission on Mars. <i>Nature Geoscience</i> , 2020 , 13, 183-189	18.3	155
113	SEIS: Insight's Seismic Experiment for Internal Structure of Mars. <i>Space Science Reviews</i> , 2019 , 215, 12	7.5	143
112	An overview of the Mars Reconnaissance Orbiter (MRO) science mission. <i>Journal of Geophysical Research</i> , 2007 , 112,		135
111	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. <i>Nature Geoscience</i> , 2020 , 13, 213-220	18.3	129
110	The seismicity of Mars. <i>Nature Geoscience</i> , 2020 , 13, 205-212	18.3	121
109	Venusian highlands: geoid to topography ratios and their implications. <i>Earth and Planetary Science Letters</i> , 1991 , 107, 582-597	5.3	108
108	Selection of the InSight Landing Site. <i>Space Science Reviews</i> , 2017 , 211, 5-95	7.5	104
107	Corona Formation and Heat Loss on Venus by Coupled Upwelling and Delamination. <i>Science</i> , 1997 , 277, 1289-1294	33.3	98
106	The atmosphere of Mars as observed by InSight. <i>Nature Geoscience</i> , 2020 , 13, 190-198	18.3	93
105	Experimental and observational evidence for plume-induced subduction on Venus. <i>Nature Geoscience</i> , 2017 , 10, 349-355	18.3	83
104	The state and future of Mars polar science and exploration. <i>Icarus</i> , 2000 , 144, 210-42	3.8	83

103	The Heat Flow and Physical Properties Package (HP3) for the InSight Mission. <i>Space Science Reviews</i> , 2018 , 214, 1	7.5	72
102	Evidence for Active Hotspots on Venus from Analysis of Magellan Gravity Data. <i>Icarus</i> , 1994 , 112, 2-26	3.8	71
101	Planned Products of the Mars Structure Service for the InSight Mission to Mars. <i>Space Science Reviews</i> , 2017 , 211, 611-650	7.5	69
100	Accumulation and erosion of Mars' south polar layered deposits. <i>Science</i> , 2007 , 317, 1715-8	33.3	66
99	Density of Mars' south polar layered deposits. <i>Science</i> , 2007 , 317, 1718-9	33.3	65
98	Large topographic rises on Venus: Implications for mantle upwelling. <i>Journal of Geophysical Research</i> , 1995 , 100, 23317		65
97	Venus Surface Composition Constrained by Observation and Experiment. <i>Space Science Reviews</i> , 2017 , 212, 1511-1540	7.5	64
96	Pulsed inflation of pahoehoe lava flows: implications for flood basalt emplacement. <i>Earth and Planetary Science Letters</i> , 1999 , 168, 7-18	5.3	64
95	InSight Auxiliary Payload Sensor Suite (APSS). <i>Space Science Reviews</i> , 2019 , 215, 1	7.5	64
94	Pre-mission InSights on the Interior of Mars. <i>Space Science Reviews</i> , 2019 , 215, 1	7.5	61
93	Atmospheric Science with InSight. <i>Space Science Reviews</i> , 2018 , 214, 1	7.5	61
92	Geology of the InSight landing site on Mars. <i>Nature Communications</i> , 2020 , 11, 1014	17.4	59
91	Global mapping of crustal and lithospheric thickness on Venus. <i>Journal of Geophysical Research</i> , 2006 , 111,		55
90	Magellan observations of Alpha Regio: Implications for formation of complex ridged terrains on Venus. <i>Journal of Geophysical Research</i> , 1992 , 97, 13563		55
89	Preliminary analysis of an expanded corona database for Venus. <i>Geophysical Research Letters</i> , 2001 , 28, 4267-4270	4.9	54
88	Thickness and structure of the martian crust from InSight seismic data. <i>Science</i> , 2021 , 373, 438-443	33.3	54
87	Seismic detection of the martian core. <i>Science</i> , 2021 , 373, 443-448	33.3	54
86	Geology and Physical Properties Investigations by the InSight Lander. <i>Space Science Reviews</i> , 2018 , 214, 1	7.5	53

85	Origin of Corona-Dominated Topographic Rises on Venus. <i>Icarus</i> , 1999 , 139, 100-115	3.8	50
84	The interaction of mantle plumes with surface thermal and chemical boundary layers: Applications to hotspots on Venus. <i>Journal of Geophysical Research</i> , 1996 , 101, 5397-5410		48
83	Near-infrared spectroscopy of probable impact melt from three large lunar highland craters. <i>Icarus</i> , 1985 , 63, 442-452	3.8	48
82	Upper mantle structure of Mars from InSight seismic data. <i>Science</i> , 2021 , 373, 434-438	33.3	45
81	The Marsquake catalogue from InSight, sols 0078. <i>Physics of the Earth and Planetary Interiors</i> , 2021 , 310, 106595	2.3	45
80	Planetary geochemical investigations using Raman and laser-induced breakdown spectroscopy. <i>Applied Spectroscopy</i> , 2014 , 68, 925-36	3.1	43
79	Crustal and time-varying magnetic fields at the InSight landing site on Mars. <i>Nature Geoscience</i> , 2020 , 13, 199-204	18.3	42
78	Volcanism and volatile recycling on a one-plate planet: Applications to Venus. <i>Journal of Geophysical Research</i> , 2007 , 112,		41
77	The Thermal State and Interior Structure of Mars. <i>Geophysical Research Letters</i> , 2018 , 45, 12,198-12,209	4.9	41
76	Constraints on mantle plumes on Venus: Implications for volatile history. <i>Icarus</i> , 2012 , 217, 510-523	3.8	39
75	Gravitational spreading of high terrain in Ishtar Terra, Venus. <i>Journal of Geophysical Research</i> , 1992 , 97, 16121		37
74	Impact-Seismic Investigations of the InSight Mission. <i>Space Science Reviews</i> , 2018 , 214, 1	7.5	36
73	Deep Space 2: The Mars Microprobe Mission. <i>Journal of Geophysical Research</i> , 1999 , 104, 27013-27030		35
72	Companion guide to the marsquake catalog from InSight, Sols 0078: Data content and non-seismic events. <i>Physics of the Earth and Planetary Interiors</i> , 2021 , 310, 106597	2.3	35
71	Phoenix and MRO coordinated atmospheric measurements. <i>Journal of Geophysical Research</i> , 2010 , 115,		34
70	Mars Reconnaissance Orbiter Radio Science Gravity Investigation. <i>Journal of Geophysical Research</i> , 2007 , 112,		34
69	Styles of deformation in Ishtar Terra and their implications. <i>Journal of Geophysical Research</i> , 1992 , 97, 16085		34
68	Venus Interior Structure and Dynamics. <i>Space Science Reviews</i> , 2018 , 214, 1	7.5	32

67	Future Mars geophysical observatories for understanding its internal structure, rotation, and evolution. <i>Planetary and Space Science</i> , 2012 , 68, 123-145	2	29
66	Statistical distribution of tumuli on pahoehoe flow surfaces: Analysis of examples in Hawaii and Iceland and potential applications to lava flows on Mars. <i>Journal of Geophysical Research</i> , 2005 , 110,		29
65	Insights into corona formation through statistical analyses. <i>Journal of Geophysical Research</i> , 2002 , 107, 18-1-18-12		29
64	Lunar heat flow: Regional perspective of the Apollo landing sites. <i>Journal of Geophysical Research E: Planets</i> , 2014 , 119, 47-63	4.1	27
63	The history of Mars' dynamo as revealed by modeling magnetic anomalies near Tyrrenus Mons and Syrtis Major. <i>Journal of Geophysical Research</i> , 2012 , 117,		27
62	Tumulus development on lava flows: insights from observations of active tumuli and analysis of formation models. <i>Bulletin of Volcanology</i> , 2012 , 74, 931-946	2.4	27
61	Gravity-driven deformation of the crust on Venus. <i>Geophysical Research Letters</i> , 1988 , 15, 693-696	4.9	26
60	Elastic thickness estimates for the northern lowlands of Mars. <i>Earth and Planetary Science Letters</i> , 2006 , 248, 830-839	5.3	25
59	Penetration tests on the DS-2 Mars microprobes: penetration depth and impact accelerometry. <i>Planetary and Space Science</i> , 2000 , 48, 419-436	2	25
58	Examination of gully sites on Mars with the shallow radar. <i>Journal of Geophysical Research</i> , 2010 , 115,		24
57	Admittance survey of type 1 coronae on Venus. <i>Journal of Geophysical Research</i> , 2004 , 109,		24
56	Shallow Radar (SHARAD), pedestal craters, and the lost Martian layers: Initial assessments. <i>Journal of Geophysical Research</i> , 2011 , 116,		23
55	Tectonic effects of climate change on Venus. <i>Journal of Geophysical Research</i> , 1999 , 104, 30743-30756		19
54	A gravity survey of Type 2 coronae on Venus. <i>Journal of Geophysical Research</i> , 2003 , 108,		18
53	Lithospheric structure in the eastern region of Mars dichotomy boundary. <i>Planetary and Space Science</i> , 2007 , 55, 280-288	2	17
52	Geologic evolution of the Martian dichotomy in the Ismenius area of Mars and implications for plains magnetization. <i>Journal of Geophysical Research</i> , 2004 , 109,		17
51	Characterization and formation of polygonal fractures on Venus. <i>Journal of Geophysical Research</i> , 2002 , 107, 8-1-8-17		17
50	Themis Regio, Venus: Evidence for recent (?) volcanism from VIRTIS data. <i>Icarus</i> , 2016 , 271, 375-386	3.8	16

49	Large topographic rises, coronae, large flow fields, and large volcanoes on Venus: Evidence for mantle plumes? 2005 ,		16
48	Tectonic and Thermal Evolution of Venus and the Role of Volatiles: Implications for Understanding the Terrestrial Planets. <i>Geophysical Monograph Series</i> , 2007 , 45-71	1.1	15
47	Calibration of the HP3 Radiometer on InSight. <i>Earth and Space Science</i> , 2020 , 7, e2020EA001086	3.1	14
46	New constraints on the thermal and volatile evolution of Mars. <i>Physics of the Earth and Planetary Interiors</i> , 2007 , 164, 161-176	2.3	14
45	The InSight Mars Lander and Its Effect on the Subsurface Thermal Environment. <i>Space Science Reviews</i> , 2017 , 211, 259-275	7.5	13
44	Watershed identification of polygonal patterns in noisy SAR images. <i>IEEE Transactions on Image Processing</i> , 2003 , 12, 740-50	8.7	13
43	Interannual perturbations of the Martian surface heat flow by atmospheric dust opacity variations. <i>Journal of Geophysical Research E: Planets</i> , 2016 , 121, 2166-2175	4.1	12
42	Coronae formation on Venus via extension and lithospheric instability. <i>Journal of Geophysical Research E: Planets</i> , 2014 , 119, 2568-2582	4.1	11
41	Relaxation of the Martian dichotomy boundary: Faulting in the Ismenius Region and constraints on the early evolution of Mars. <i>Journal of Geophysical Research</i> , 2005 , 110,		11
40	Effects of lithospheric properties on the formation of Type 2 coronae on Venus. <i>Journal of Geophysical Research</i> , 2003 , 108,		11
39	Surface weathering on Venus: Constraints from kinetic, spectroscopic, and geochemical data. <i>Icarus</i> , 2021 , 358, 114139	3.8	11
38	Signatures of Lithospheric Flexure and Elevated Heat Flow in Stereo Topography at Coronae on Venus. <i>Journal of Geophysical Research E: Planets</i> , 2018 , 123, 369-389	4.1	10
37	InSight constraints on the global character of the Martian crust. <i>Journal of Geophysical Research E: Planets</i> ,	4.1	10
36	The influence of temperature-dependent viscosity on lava flow dynamics. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013 , 118, 1516-1532	3.8	9
35	Coronae of Parga Chasma, Venus. <i>Journal of Geophysical Research</i> , 2007 , 112,		9
34	Laufey Regio: A newly discovered topographic rise on Venus. <i>Journal of Geophysical Research</i> , 2004 , 109,		9
33	Thermal Conductivity of the Martian Soil at the InSight Landing Site From HP3 Active Heating Experiments. <i>Journal of Geophysical Research E: Planets</i> , 2021 , 126, e2021JE006861	4.1	9
32	Potential Effects of Surface Temperature Variations and Disturbances and Thermal Convection on the Mars InSight HP3 Heat-Flow Determination. <i>Space Science Reviews</i> , 2017 , 211, 277-313	7.5	8

31	Reply to: Self et al. discussion of Pulsed inflation of pahoehoe lava flows: implications for flood basalt emplacement <i>Earth and Planetary Science Letters</i> , 2000 , 179, 425-428	5.3	8
30	MSS/1: Single-Station and Single-Event Marsquake Inversion. <i>Earth and Space Science</i> , 2020 , 7, e2020EA0011188	3.1	7
29	Search for active lava flows with VIRTIS on Venus Express. <i>Journal of Geophysical Research E: Planets</i> , 2017 , 122, 1021-1045	4.1	7
28	Small-scale impacts into rock: An evaluation of the effects of target temperature on experimental results. <i>Geophysical Research Letters</i> , 1986 , 13, 745-748	4.9	7
27	Calibration of the Heat Flow and Physical Properties Package (HP) for the InSight Mars Mission. <i>Earth and Space Science</i> , 2019 , 6, 2556-2574	3.1	7
26	Martian Mantle Heat Flow Estimate From the Lack of Lithospheric Flexure in the South Pole of Mars: Implications for Planetary Evolution and Basal Melting. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL091409	4.9	7
25	Analyzing Low Frequency Seismic Events at Cerberus Fossae as Long Period Volcanic Quakes. <i>Journal of Geophysical Research E: Planets</i> , 2021 , 126, e2020JE006518	4.1	7
24	Gravity analysis of Parga and Hecate chasmata: Implications for rift and corona formation. <i>Journal of Geophysical Research</i> , 2010 , 115,		6
23	Near Surface Properties of Martian Regolith Derived From InSight HP3-RAD Temperature Observations During Phobos Transits. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL093542	4.9	6
22	VERITAS (Venus Emissivity, Radio Science, InSAR, Topography And Spectroscopy): A Proposed Discovery Mission		5
21	The Origin of Observed Magnetic Variability for a Sol on Mars From InSight. <i>Journal of Geophysical Research E: Planets</i> , 2020 , 125, e2020JE006505	4.1	5
20	Depletion of Heat Producing Elements in the Martian Mantle. <i>Geophysical Research Letters</i> , 2019 , 46, 12756-12763	4.9	5
19	VISAR: A next generation interferometric radar for venus exploration 2015 ,		4
18	Scientific objectives of the DYNAMO mission. <i>Advances in Space Research</i> , 2001 , 27, 1851-1860	2.4	4
17	Correction to Venus tectonics: An overview of Magellan observations by Sean C. Solomon et al.. <i>Journal of Geophysical Research</i> , 1992 , 97, 16381		4
16	The Venus Emissivity Mapper (VEM): obtaining global mineralogy of Venus from orbit 2018 ,		4
15	Multispectral surface emissivity from VIRTIS on Venus Express. <i>Icarus</i> , 2020 , 335, 113400	3.8	4
14	The Venus Emissivity Mapper (VEM) concept 2016 ,		3

13	X band model of Venus atmosphere permittivity. <i>Radio Science</i> , 2010 , 45, n/a-n/a	1.4	3
12	DYNAMO: a Mars upper atmosphere package for investigating solar wind interaction and escape processes, and mapping Martian fields. <i>Advances in Space Research</i> , 2004 , 33, 2228-2235	2.4	3
11	The Determination of the Rotational State and Interior Structure of Venus with VERITAS. <i>Planetary Science Journal</i> , 2021 , 2, 220	2.9	3
10	A Global Survey of Lithospheric Flexure at Steep-Sided Domical Volcanoes on Venus Reveals Intermediate Elastic Thicknesses. <i>Journal of Geophysical Research E: Planets</i> , 2021 , 126, e2020JE006756	4.1	3
9	2018 ,		2
8	Venus tectonics81-120		2
7	Venus: Surface and Interior 2007 , 149-168		2
6	The Venus Emissivity Mapper concept 2017 ,		2
5	Convection dans les planètes « molles » : du laboratoire à Venus 2020 , 10-15	0.1	1
4	Color Properties at the Mars InSight Landing Site. <i>Earth and Space Science</i> , 2021 , 8, e2020EA001336	3.1	1
3	Probing the Interiors of Planets with Geophysical Tools 2014 , 1185-1204		0
2	Space Weather Observations With InSight. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL095432	4.9	0
1	Investigation of magnetic field signals during vortex-induced pressure drops at InSight. <i>Planetary and Space Science</i> , 2022 , 105487	2	0