

Bruce Banerdt

List of Publications by Year in descending order

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129
papers

9,796
citations

57719

44
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38368

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161
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161
docs citations

161
times ranked

3427
citing authors

#	ARTICLE	IF	CITATIONS
1	The interaction between the SEIS seismometer of the InSight Martian mission and a regolith simulant. <i>Geotechnique</i> , 2024, 74, 42-53.	2.2	2
2	Seismic constraints from a Mars impact experiment using InSight and Perseverance. <i>Nature Astronomy</i> , 2022, 6, 59-64.	4.2	9
3	Seasonal variations of subsurface seismic velocities monitored by the SEIS-InSight seismometer on Mars. <i>Geophysical Journal International</i> , 2022, 229, 776-799.	1.0	10
4	Investigation of magnetic field signals during vortex-induced pressure drops at InSight. <i>Planetary and Space Science</i> , 2022, 217, 105487.	0.9	3
5	The Far Side of Mars: Two Distant Marsquakes Detected by InSight. <i>The Seismic Record</i> , 2022, 2, 88-99.	1.3	29
6	An autonomous lunar geophysical experiment package (ALGEP) for future space missions. <i>Experimental Astronomy</i> , 2022, 54, 617-640.	1.6	2
7	InSight Constraints on the Global Character of the Martian Crust. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	45
8	InSight Pressure Data Recalibration, and Its Application to the Study of Long-Term Pressure Changes on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	12
9	Evidence for crustal seismic anisotropy at the InSight lander site. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117654.	1.8	21
10	Companion guide to the marsquake catalog from InSight, Sols 0-478: Data content and non-seismic events. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 310, 106597.	0.7	64
11	The Marsquake catalogue from InSight, sols 0-478. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 310, 106595.	0.7	97
12	Super High Frequency Events: A New Class of Events Recorded by the InSight Seismometers on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006599.	1.5	19
13	The Polarization of Ambient Noise on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006545.	1.5	33
14	High-Frequency Seismic Events on Mars Observed by InSight. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006670.	1.5	40
15	Constraining Martian Regolith and Vortex Parameters From Combined Seismic and Meteorological Measurements. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006410.	1.5	16
16	Analyzing Low Frequency Seismic Events at Cerberus Fossae as Long Period Volcanic Quakes. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006518.	1.5	19
17	Finding SEIS North on Mars: Comparisons Between SEIS Sundial, Inertial and Imaging Measurements and Consequences for Seismic Analysis. <i>Earth and Space Science</i> , 2021, 8, e2020EA001286.	1.1	3
18	Autocorrelation of the Ground Vibrations Recorded by the SEIS InSight Seismometer on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006498.	1.5	34

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19	Listening for the Landing: Seismic Detections of Perseverance's Arrival at Mars With InSight. Earth and Space Science, 2021, 8, e2020EA001585.	1.1	5
20	A Comodulation Analysis of Atmospheric Energy Injection Into the Ground Motion at InSight, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006538.	1.5	33
21	First Focal Mechanisms of Marsquakes. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006546.	1.5	43
22	Magnitude Scales for Marsquakes Calibrated from InSight Data. Bulletin of the Seismological Society of America, 2021, 111, 3003-3015.	1.1	25
23	Vortex-Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multi-Instrument Observations, Analysis, and Implications. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006757.	1.5	23
24	Seismic Noise Autocorrelations on Mars. Earth and Space Science, 2021, 8, e2021EA001755.	1.1	31
25	Thickness and structure of the martian crust from InSight seismic data. Science, 2021, 373, 438-443.	6.0	140
26	Forward Modeling of the Phobos Tides and Applications to the First Martian Year of the InSight Mission. Earth and Space Science, 2021, 8, e2021EA001669.	1.1	4
27	Thermal Conductivity of the Martian Soil at the InSight Landing Site From HP ³ Active Heating Experiments. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006861.	1.5	23
28	Upper mantle structure of Mars from InSight seismic data. Science, 2021, 373, 434-438.	6.0	105
29	Seismic detection of the martian core. Science, 2021, 373, 443-448.	6.0	169
30	Near Surface Properties of Martian Regolith Derived From InSight HP ³ RAD Temperature Observations During Phobos Transits. Geophysical Research Letters, 2021, 48, e2021GL093542.	1.5	13
31	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
32	A Reconstruction Algorithm for Temporally Aliased Seismic Signals Recorded by the InSight Mars Lander. Earth and Space Science, 2021, 8, e2020EA001234.	1.1	6
33	A Study of Daytime Convective Vortices and Turbulence in the Martian Planetary Boundary Layer Based on Half-Year of InSight Atmospheric Measurements and Large-Eddy Simulations. Journal of Geophysical Research E: Planets, 2021, 126, .	1.5	45
34	Search for Infrasound Signals in InSight Data Using Coupled Pressure/Ground Deformation Methods. Bulletin of the Seismological Society of America, 2021, 111, 3055-3064.	1.1	8
35	The Site Tilt and Lander Transfer Function from the Short-Period Seismometer of InSight on Mars. Bulletin of the Seismological Society of America, 2021, 111, 2889-2908.	1.1	7
36	Potential Pitfalls in the Analysis and Structural Interpretation of Seismic Data from the Mars InSight Mission. Bulletin of the Seismological Society of America, 2021, 111, 2982-3002.	1.1	42

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37	Improving Constraints on Planetary Interiors With PPs Receiver Functions. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006983.	1.5	34
38	Resonances and Lander Modes Observed by InSight on Mars (1–9 Hz). <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2924-2950.	1.1	30
39	Scattering Attenuation of the Martian Interior through Coda-Wave Analysis. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 3035-3054.	1.1	17
40	Seasonal seismic activity on Mars. <i>Earth and Planetary Science Letters</i> , 2021, 576, 117171.	1.8	13
41	Seismic High-Resolution Acquisition Electronics for the NASA InSight Mission on Mars. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2909-2923.	1.1	17
42	Resonances of the InSight Seismometer on Mars. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2951-2963.	1.1	15
43	Energy Envelope and Attenuation Characteristics of High-Frequency (HF) and Very-High-Frequency (VF) Martian Events. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 3016-3034.	1.1	23
44	Space Weather Observations With InSight. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095432.	1.5	5
45	The shallow structure of Mars at the InSight landing site from inversion of ambient vibrations. <i>Nature Communications</i> , 2021, 12, 6756.	5.8	40
46	Anatomy of Continuous Mars SEIS and Pressure Data from Unsupervised Learning. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2964-2981.	1.1	14
47	A New Crater Near InSight: Implications for Seismic Impact Detectability on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006382.	1.5	24
48	Detection, Analysis, and Removal of Glitches From InSight's Seismic Data From Mars. <i>Earth and Space Science</i> , 2020, 7, e2020EA001317.	1.1	75
49	MSS/1: Single-Station and Single-Event Marsquake Inversion. <i>Earth and Space Science</i> , 2020, 7, e2020EA001118.	1.1	16
50	Geophysical Observations of Phobos Transits by InSight. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089099.	1.5	10
51	The Origin of Observed Magnetic Variability for a Sol on Mars From InSight. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006505.	1.5	15
52	Scientific Observations With the InSight Solar Arrays: Dust, Clouds, and Eclipses on Mars. <i>Earth and Space Science</i> , 2020, 7, e2019EA000992.	1.1	24
53	Subsurface Structure at the InSight Landing Site From Compliance Measurements by Seismic and Meteorological Experiments. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006387.	1.5	44
54	Pressure Effects on the SEIS on InSight Instrument, Improvement of Seismic Records, and Characterization of Long Period Atmospheric Waves From Ground Displacements. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006278.	1.5	31

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55	Martian Infrasound: Numerical Modeling and Analysis of InSight's Data. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006376.	1.5	28
56	Geology of the InSight landing site on Mars. Nature Communications, 2020, 11, 1014.	5.8	107
57	The atmosphere of Mars as observed by InSight. Nature Geoscience, 2020, 13, 190-198.	5.4	161
58	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	5.4	207
59	Crustal and time-varying magnetic fields at the InSight landing site on Mars. Nature Geoscience, 2020, 13, 199-204.	5.4	68
60	The seismicity of Mars. Nature Geoscience, 2020, 13, 205-212.	5.4	194
61	On-Deck Seismology: Lessons from InSight for Future Planetary Seismology. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006353.	1.5	25
62	Monitoring of Dust Devil Tracks Around the InSight Landing Site, Mars, and Comparison With In Situ Atmospheric Data. Geophysical Research Letters, 2020, 47, e2020GL087234.	1.5	30
63	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	5.4	274
64	SEIS: InSight's Seismic Experiment for Internal Structure of Mars. Space Science Reviews, 2019, 215, 12.	3.7	238
65	Sparse Reconstruction of Aliased Seismic Signals Recorded During the InSight Mars Mission. , 2019, , .		1
66	InSight Auxiliary Payload Sensor Suite (APSS). Space Science Reviews, 2019, 215, 1.	3.7	104
67	Pre-mission InSights on the Interior of Mars. Space Science Reviews, 2019, 215, 1.	3.7	85
68	Determining True North on Mars by Using a Sundial on InSight. Space Science Reviews, 2019, 215, 1.	3.7	2
69	The first active seismic experiment on Mars to characterize the shallow subsurface structure at the InSight landing site. , 2019, , .		10
70	Geophysical Investigations of Habitability in Ice-Covered Ocean Worlds. Journal of Geophysical Research E: Planets, 2018, 123, 180-205.	1.5	133
71	Magnitude Scales for Marsquakes. Bulletin of the Seismological Society of America, 2018, 108, 2764-2777.	1.1	18
72	A Numerical Model of the SEIS Leveling System Transfer Matrix and Resonances: Application to SEIS Rotational Seismology and Dynamic Ground Interaction. Space Science Reviews, 2018, 214, 1.	3.7	22

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73	The Thermal State and Interior Structure of Mars. <i>Geophysical Research Letters</i> , 2018, 45, 12,198.	1.5	69
74	The Marsquake Service: Securing Daily Analysis of SEIS Data and Building the Martian Seismicity Catalogue for InSight. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	41
75	Impact-Seismic Investigations of the InSight Mission. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	48
76	Atmospheric Science with InSight. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	88
77	On the Detectability and Use of Normal Modes for Determining Interior Structure of Mars. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	11
78	Development of the Primary Sorption Pump for the SEIS Seismometer of the InSight Mission to Mars. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	3
79	The Color Cameras on the InSight Lander. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	50
80	The Heat Flow and Physical Properties Package (HP3) for the InSight Mission. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	105
81	Geology and Physical Properties Investigations by the InSight Lander. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	77
82	Influence of Body Waves, Instrumentation Resonances, and Prior Assumptions on Rayleigh Wave Ellipticity Inversion for Shallow Structure at the InSight Landing Site. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	10
83	Selection of the InSight Landing Site. <i>Space Science Reviews</i> , 2017, 211, 5-95.	3.7	150
84	An Investigation of the Mechanical Properties of Some Martian Regolith Simulants with Respect to the Surface Properties at the InSight Mission Landing Site. <i>Space Science Reviews</i> , 2017, 211, 191-213.	3.7	42
85	Planned Products of the Mars Structure Service for the InSight Mission to Mars. <i>Space Science Reviews</i> , 2017, 211, 611-650.	3.7	80
86	Finite-Difference Modeling of Acoustic and Gravity Wave Propagation in Mars Atmosphere: Application to Infrasonics Emitted by Meteor Impacts. <i>Space Science Reviews</i> , 2017, 211, 547-570.	3.7	20
87	The Noise Model of the SEIS Seismometer of the InSight Mission to Mars. <i>Space Science Reviews</i> , 2017, 211, 383-428.	3.7	73
88	Preparing for InSight: An Invitation to Participate in a Blind Test for Martian Seismicity. <i>Seismological Research Letters</i> , 2017, 88, 1290-1302.	0.8	37
89	Modeling of Ground Deformation and Shallow Surface Waves Generated by Martian Dust Devils and Perspectives for Near-Surface Structure Inversion. <i>Space Science Reviews</i> , 2017, 211, 501-524.	3.7	49
90	Analysis of Regolith Properties Using Seismic Signals Generated by InSight's HP3 Penetrator. <i>Space Science Reviews</i> , 2017, 211, 315-337.	3.7	31

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91	Editorial on: Topical Collection on InSight Mission to Mars. Space Science Reviews, 2017, 211, 1-3.	3.7	17
92	Evaluating the Wind-Induced Mechanical Noise on the InSight Seismometers. Space Science Reviews, 2017, 211, 429-455.	3.7	65
93	Estimations of the Seismic Pressure Noise on Mars Determined from Large Eddy Simulations and Demonstration of Pressure Decorrelation Techniques for the InSight Mission. Space Science Reviews, 2017, 211, 457-483.	3.7	53
94	Seismometer Detection of Dust Devil Vortices by Ground Tilt. Bulletin of the Seismological Society of America, 2015, 105, 3015-3023.	1.1	39
95	Verifying single-station seismic approaches using Earth-based data: Preparation for data return from the InSight mission to Mars. Icarus, 2015, 248, 230-242.	1.1	71
96	Probing the Interiors of Planets with Geophysical Tools. , 2014, , 1185-1204.		2
97	Lunar Net—a proposal in response to an ESA M3 call in 2010 for a medium sized mission. Experimental Astronomy, 2012, 33, 587-644.	1.6	15
98	Farside explorer: unique science from a mission to the farside of the moon. Experimental Astronomy, 2012, 33, 529-585.	1.6	52
99	Future Mars geophysical observatories for understanding its internal structure, rotation, and evolution. Planetary and Space Science, 2012, 68, 123-145.	0.9	32
100	Lunar Suitcase Science: A Lunar Regolith Characterization Kit (LRoCK). , 2010, , .		0
101	Next generation Autonomous Lunar Geophysical Experiment Package. , 2009, , .		0
102	The Borealis basin and the origin of the martian crustal dichotomy. Nature, 2008, 453, 1212-1215.	13.7	285
103	Using the Moon as a low-noise seismic detector for strange quark nuggets. Nuclear Physics, Section B, Proceedings Supplements, 2007, 166, 203-208.	0.5	5
104	Utopia and Hellas basins, Mars: Twins separated at birth. Journal of Geophysical Research, 2006, 111, .	3.3	30
105	Scientific results of the Mars Exploration Rovers, Spirit and Opportunity. Proceedings of the International Astronomical Union, 2006, 2, 336-337.	0.0	0
106	Lunar seismic search for strange quark matter. Advances in Space Research, 2006, 37, 1889-1893.	1.2	9
107	New Perspectives on Ancient Mars. Science, 2005, 307, 1214-1220.	6.0	265
108	SEISMIC MOON SEARCH FOR STRANGE QUARK MATTER. , 2005, , .		0

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109	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
110	Huge, CO ₂ -charged debris-flow deposit and tectonic sagging in the northern plains of Mars. <i>Geology</i> , 2001, 29, 427.	2.0	51
111	Ancient Geodynamics and Global-Scale Hydrology on Mars. <i>Science</i> , 2001, 291, 2587-2591.	6.0	453
112	The NetLander very broad band seismometer. <i>Planetary and Space Science</i> , 2000, 48, 1289-1302.	0.9	61
113	Internal Structure and Early Thermal Evolution of Mars from Mars Global Surveyor Topography and Gravity. <i>Science</i> , 2000, 287, 1788-1793.	6.0	518
114	The Global Topography of Mars and Implications for Surface Evolution. <i>Science</i> , 1999, 284, 1495-1503.	6.0	826
115	Shape of the northern hemisphere of Mars from the Mars Orbiter Laser Altimeter (MOLA). <i>Geophysical Research Letters</i> , 1998, 25, 4393-4396.	1.5	23
116	Topography of the Northern Hemisphere of Mars from the Mars Orbiter Laser Altimeter. <i>Science</i> , 1998, 279, 1686-1692.	6.0	196
117	Observations of the North Polar Region of Mars from the Mars Orbiter Laser Altimeter. , 1998, 282, 2053-2060.		231
118	A Prediction of Mars Seismicity from Surface Faulting. <i>Science</i> , 1992, 258, 979-981.	6.0	84
119	Small-scale fracture patterns on the volcanic plains of Venus. <i>Journal of Geophysical Research</i> , 1992, 97, 16149-16166.	3.3	31
120	Reconciliation of stress and structural histories of the Tharsis region of Mars. <i>Journal of Geophysical Research</i> , 1991, 96, 15617-15633.	3.3	179
121	Permanent uplift in magmatic systems with application to the Tharsis Region of Mars. <i>Journal of Geophysical Research</i> , 1990, 95, 5089-5100.	3.3	44
122	Deformational models of rifting and folding on Venus. <i>Journal of Geophysical Research</i> , 1988, 93, 4759-4772.	3.3	46
123	Igneous processes and closed system evolution of the Tharsis region of Mars. <i>Journal of Geophysical Research</i> , 1988, 93, 10225-10235.	3.3	28
124	Support of long-wavelength loads on Venus and implications for internal structure. <i>Journal of Geophysical Research</i> , 1986, 91, 403-419.	3.3	71
125	Thick shell tectonics on one-plate planets: Applications to Mars. <i>Journal of Geophysical Research</i> , 1982, 87, 9723-9733.	3.3	116
126	Seasonal carbon dioxide exchange between the regolith and atmosphere of Mars: Experimental and theoretical studies. <i>Journal of Geophysical Research</i> , 1982, 87, 10215-10225.	3.3	24

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127	Mars: The regolith-atmosphere-cap system and climate change. <i>Icarus</i> , 1982, 50, 381-407.	1.1	145
128	IO: Could SO ₂ condensation/sublimation cause the sometimes reported post-eclipse brightening?. <i>Geophysical Research Letters</i> , 1981, 8, 625-628.	1.5	18
129	Preparing for InSight: Evaluation of the Blind Test for Martian Seismicity. <i>Seismological Research Letters</i> , 0, , .	0.8	5