

Simon C Stähler

List of Publications by Year in descending order

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76
papers

3,707
citations

147726

31
h-index

138417

58
g-index

110
all docs

110
docs citations

110
times ranked

1919
citing authors

#	ARTICLE	IF	CITATIONS
1	Initial results from the InSight mission on Mars. <i>Nature Geoscience</i> , 2020, 13, 183-189.	5.4	274
2	SEIS: InSight's Seismic Experiment for Internal Structure of Mars. <i>Space Science Reviews</i> , 2019, 215, 12.	3.7	238
3	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. <i>Nature Geoscience</i> , 2020, 13, 213-220.	5.4	207
4	AxiSEM: broadband 3-D seismic wavefields in axisymmetric media. <i>Solid Earth</i> , 2014, 5, 425-445.	1.2	205
5	The seismicity of Mars. <i>Nature Geoscience</i> , 2020, 13, 205-212.	5.4	194
6	Seismic detection of the martian core. <i>Science</i> , 2021, 373, 443-448.	6.0	169
7	The atmosphere of Mars as observed by InSight. <i>Nature Geoscience</i> , 2020, 13, 190-198.	5.4	161
8	Thickness and structure of the martian crust from InSight seismic data. <i>Science</i> , 2021, 373, 438-443.	6.0	140
9	Geophysical Investigations of Habitability in Ice-Covered Ocean Worlds. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 180-205.	1.5	133
10	Instaseis: instant global seismograms based on a broadband waveform database. <i>Solid Earth</i> , 2015, 6, 701-717.	1.2	111
11	Upper mantle structure of Mars from InSight seismic data. <i>Science</i> , 2021, 373, 434-438.	6.0	105
12	The Marsquake catalogue from InSight, sols 0-478. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 310, 106595.	0.7	97
13	Monitoring stress changes in a concrete bridge with coda wave interferometry. <i>Journal of the Acoustical Society of America</i> , 2011, 129, 1945-1952.	0.5	93
14	Pre-mission InSights on the Interior of Mars. <i>Space Science Reviews</i> , 2019, 215, 1.	3.7	85
15	Science Goals and Objectives for the Dragonfly Titan Rotorcraft Relocatable Lander. <i>Planetary Science Journal</i> , 2021, 2, 130.	1.5	80
16	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
17	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
18	Performance report of the RHUM-RUM ocean bottom seismometer network around La Réunion, western Indian Ocean. <i>Advances in Geosciences</i> , 0, 41, 43-63.	12.0	55

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19	Fully probabilistic seismic source inversion – Part 1: Efficient parameterisation. <i>Solid Earth</i> , 2014, 5, 1055-1069.	1.2	53
20	The lack of equipartitioning in global body wave coda. <i>Geophysical Research Letters</i> , 2015, 42, 7483-7489.	1.5	48
21	Impact-Seismic Investigations of the InSight Mission. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	48
22	Seismology on Mars: An analysis of direct, reflected, and converted seismic body waves with implications for interior structure. <i>Physics of the Earth and Planetary Interiors</i> , 2022, 325, 106851.	0.7	45
23	First Focal Mechanisms of Marsquakes. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006546.	1.5	43
24	Potential Pitfalls in the Analysis and Structural Interpretation of Seismic Data from the Mars InSight Mission. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2982-3002.	1.1	42
25	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
26	High-Frequency Seismic Events on Mars Observed by InSight. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006670.	1.5	40
27	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
28	On-Demand Custom Broadband Synthetic Seismograms. <i>Seismological Research Letters</i> , 2017, 88, 1127-1140.	0.8	39
29	Expected Seismicity and the Seismic Noise Environment of Europa. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 163-179.	1.5	38
30	Seismic Wave Propagation in Icy Ocean Worlds. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 206-232.	1.5	35
31	Structural monitoring of a highway bridge using passive noise recordings from street traffic. <i>Journal of the Acoustical Society of America</i> , 2015, 138, 3864-3872.	0.5	33
32	The Polarization of Ambient Noise on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006545.	1.5	33
33	A Comodulation Analysis of Atmospheric Energy Injection Into the Ground Motion at InSight, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006538.	1.5	33
34	Vital Signs: Seismology of Icy Ocean Worlds. <i>Astrobiology</i> , 2018, 18, 37-53.	1.5	31
35	Clock errors in land and ocean bottom seismograms: high-accuracy estimates from multiple-component noise cross-correlations. <i>Geophysical Journal International</i> , 2018, 214, 2014-2034.	1.0	31
36	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

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37	Triplicated P-wave measurements for waveform tomography of the mantle transition zone. <i>Solid Earth</i> , 2012, 3, 339-354.	1.2	29
38	The Far Side of Mars: Two Distant Marsquakes Detected by InSight. <i>The Seismic Record</i> , 2022, 2, 88-99.	1.3	29
39	From Initial Models of Seismicity, Structure and Noise to Synthetic Seismograms for Mars. <i>Space Science Reviews</i> , 2017, 211, 595-610.	3.7	25
40	On-Deck Seismology: Lessons from InSight for Future Planetary Seismology. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006353.	1.5	25
41	Magnitude Scales for Marsquakes Calibrated from InSight Data. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 3003-3015.	1.1	25
42	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
43	Low-Frequency Marsquakes and Where to Find Them: Back Azimuth Determination Using a Polarization Analysis Approach. <i>Bulletin of the Seismological Society of America</i> , 2022, 112, 1787-1805.	1.1	24
44	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
45	Fully probabilistic seismic source inversion – Part 2: Modelling errors and station covariances. <i>Solid Earth</i> , 2016, 7, 1521-1536.	1.2	21
46	A Self-Noise Model for the German DEPAS OBS Pool. <i>Seismological Research Letters</i> , 2018, 89, 1838-1845.	0.8	20
47	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
48	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
49	Magnitude Scales for Marsquakes. <i>Bulletin of the Seismological Society of America</i> , 2018, 108, 2764-2777.	1.1	18
50	Seismic sources of InSight marsquakes and seismotectonic context of Elysium Planitia, Mars. <i>Tectonophysics</i> , 2022, 837, 229434.	0.9	18
51	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
52	MSS/1: Single-Station and Single-Event Marsquake Inversion. <i>Earth and Space Science</i> , 2020, 7, e2020EA001118.	1.1	16
53	Resonances of the InSight Seismometer on Mars. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2951-2963.	1.1	15
54	Characteristics of Current-Induced Harmonic Tremor Signals in Ocean-Bottom Seismometer Records. <i>Seismological Research Letters</i> , 2021, 92, 3100-3112.	0.8	12

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55	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
56	Geophysical Observations of Phobos Transits by InSight. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089099.	1.5	10
57	Seismic Velocity Variations in a 3D Martian Mantle: Implications for the InSight Measurements. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006755.	1.5	10
58	The first active seismic experiment on Mars to characterize the shallow subsurface structure at the InSight landing site. , 2019, , .		10
59	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
60	Seismic signal from waves on Titan's seas. <i>Earth and Planetary Science Letters</i> , 2019, 520, 250-259.	1.8	9
61	Seismic constraints from a Mars impact experiment using InSight and Perseverance. <i>Nature Astronomy</i> , 2022, 6, 59-64.	4.2	9
62	Exploring planets and asteroids with 6DoF sensors: Utopia and realism. <i>Earth, Planets and Space</i> , 2020, 72, .	0.9	8
63	Estimation of the Seismic Moment Rate from an Incomplete Seismicity Catalog, in the Context of the InSight Mission to Mars. <i>Bulletin of the Seismological Society of America</i> , 2019, 109, 1125-1147.	1.1	7
64	A Reconstruction Algorithm for Temporally Aliased Seismic Signals Recorded by the InSight Mars Lander. <i>Earth and Space Science</i> , 2021, 8, e2020EA001234.	1.1	6
65	Distributed Geophysical Exploration of Enceladus and Other Ocean Worlds. , 2021, 53, .		5
66	Listening for the Landing: Seismic Detections of Perseverance's Arrival at Mars With InSight. <i>Earth and Space Science</i> , 2021, 8, e2020EA001585.	1.1	5
67	New data on direct ion storage dosimeters. <i>Radiation Protection Dosimetry</i> , 2007, 128, 120-123.	0.4	3
68	Seismic Detection of Euroquakes Originating From Europa's Silicate Interior. <i>Earth and Space Science</i> , 2022, 9, .	1.1	3
69	Visualizing Global Seismic Phases with AlpArray. <i>Seismological Research Letters</i> , 2021, 92, 3845-3855.	0.8	2
70	Seismology on Titan: A seismic signal and noise budget in preparation for Dragonfly. , 2020, , .		2
71	Questions to Heaven. <i>Astronomy and Geophysics</i> , 2021, 62, 6.22-6.25.	0.1	2
72	An autonomous lunar geophysical experiment package (ALGEP) for future space missions. <i>Experimental Astronomy</i> , 2022, 54, 617-640.	1.6	2

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73	Sparse Reconstruction of Aliased Seismic Signals Recorded During the Insight Mars Mission. , 2019, , .		1
74	Planetary Seismology: The Solar System's Ocean Worlds. , 2021, 53, .		1
75	Measuring Fundamental and Higher Mode Surface Wave Dispersion on Mars From Seismic Waveforms. Earth and Space Science, 2021, 8, e2020EA001263.	1.1	0
76	Requirements Engineering for Computational Seismology Software. Lecture Notes in Computational Science and Engineering, 2013, , 157-175.	0.1	0