

Cedric Schmelzbach

List of Publications by Year in descending order

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Version: 2024-02-01

69
papers

1,580
citations

304743

22
h-index

330143

37
g-index

85
all docs

85
docs citations

85
times ranked

1404
citing authors

#	ARTICLE	IF	CITATIONS
1	In Situ and Orbital Stratigraphic Characterization of the InSight Landing Site—A Type Example of a Regolith-Covered Lava Plain on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	17
2	Near-surface three-dimensional multicomponent source and receiver S-wave survey in the Tannwald Basin, Germany: Acquisition and data processing. <i>Near Surface Geophysics</i> , 2022, 20, 331-348.	1.2	2
3	Empirical Investigations of the Instrument Response for Distributed Acoustic Sensing (DAS) across 17 Octaves. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 1-10.	2.3	54
4	Rotation, Strain, and Translation Sensors Performance Tests with Active Seismic Sources. <i>Sensors</i> , 2021, 21, 264.	3.8	23
5	First Focal Mechanisms of Marsquakes. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006546.	3.6	43
6	Seismic detection of the martian core. <i>Science</i> , 2021, 373, 443-448.	12.6	169
7	A Reconstruction Algorithm for Temporally Aliased Seismic Signals Recorded by the InSight Mars Lander. <i>Earth and Space Science</i> , 2021, 8, e2020EA001234.	2.6	6
8	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.	2.3	30
9	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.	2.3	17
10	Resonances of the InSight Seismometer on Mars. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2951-2963.	2.3	15
11	The shallow structure of Mars at the InSight landing site from inversion of ambient vibrations. <i>Nature Communications</i> , 2021, 12, 6756.	12.8	40
12	Imaging the high-temperature geothermal field at Krafla using vertical seismic profiling. <i>Journal of Volcanology and Geothermal Research</i> , 2020, 391, 106474.	2.1	6
13	Structural joint inversion on irregular meshes. <i>Geophysical Journal International</i> , 2020, 220, 1995-2008.	2.4	15
14	Seismic exploration on the Moon, Mars and beyond. , 2020, , .		0
15	Seismological Processing of Six Degree-of-Freedom Ground-Motion Data. <i>Sensors</i> , 2020, 20, 6904.	3.8	34
16	Time-lapse ground penetrating radar difference reflection imaging of saline tracer flow in fractured rock. <i>Geophysics</i> , 2020, 85, H25-H37.	2.6	10
17	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. <i>Nature Geoscience</i> , 2020, 13, 213-220.	12.9	207
18	Exploring planets and asteroids with 6DoF sensors: Utopia and realism. <i>Earth, Planets and Space</i> , 2020, 72, .	2.5	8

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19	Characterizing a decametre-scale granitic reservoir using ground-penetrating radar and seismic methods. <i>Solid Earth</i> , 2020, 11, 1441-1455.	2.8	14
20	Monitoring the seasonal changes of an englacial conduit network using repeated ground-penetrating radar measurements. <i>Cryosphere</i> , 2020, 14, 3269-3286.	3.9	18
21	Accounting for receiver perturbations in seismic wavefield gradiometry. <i>Geophysical Journal International</i> , 2019, 218, 1748-1760.	2.4	2
22	Source-side spatial wavefield gradients in land seismic exploration. <i>Geophysics</i> , 2019, 84, P73-P85.	2.6	3
23	The first active seismic experiment on Mars to characterize the shallow subsurface structure at the InSight landing site. , 2019, , .		10
24	Advances in 6C seismology: Applications of combined translational and rotational motion measurements in global and exploration seismology. <i>Geophysics</i> , 2018, 83, WC53-WC69.	2.6	51
25	A subaquatic moraine complex in overdeepened Lake Thun (Switzerland) unravelling the deglaciation history of the Aare Glacier. <i>Quaternary Science Reviews</i> , 2018, 187, 62-79.	3.0	15
26	Geostatistical regularization operators for geophysical inverse problems on irregular meshes. <i>Geophysical Journal International</i> , 2018, 213, 1374-1386.	2.4	22
27	6-C polarization analysis using point measurements of translational and rotational ground-motion: theory and applications. <i>Geophysical Journal International</i> , 2018, 213, 77-97.	2.4	38
28	Spatial wavefield gradient-based seismic wavefield separation. <i>Geophysical Journal International</i> , 2018, 212, 1588-1599.	2.4	14
29	Single-station polarization analysis applied to seismic wavefields: A tutorial. <i>Advances in Geophysics</i> , 2018, 59, 123-170.	2.8	13
30	A Numerical Model of the SEIS Leveling System Transfer Matrix and Resonances: Application to SEIS Rotational Seismology and Dynamic Ground Interaction. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	22
31	Geology and Physical Properties Investigations by the InSight Lander. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	77
32	The Galperin source: A novel efficient multicomponent seismic source. <i>Geophysics</i> , 2018, 83, P19-P27.	2.6	9
33	Optimizing the design of vertical seismic profiling (VSP) for imaging fracture zones over hardrock basement geothermal environments. <i>Journal of Applied Geophysics</i> , 2017, 139, 25-35.	2.1	14
34	Combining amphibious geomorphology with subsurface geophysical and geological data: A neotectonic study at the front of the Alps (Bernese Alps, Switzerland). <i>Quaternary International</i> , 2017, 451, 101-113.	1.5	12
35	GPR imaging of shear zones in crystalline rock. , 2017, , .		3
36	Optimized Experimental Design in the Context of Seismic Full Waveform Inversion and Seismic Waveform Imaging. <i>Advances in Geophysics</i> , 2017, , 1-45.	2.8	10

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37	Land and ocean-bottom spatial gradient-based seismic wavefield separation. , 2017, , .		1
38	Automated, six-component, single-station ground-roll identification and suppression by combined processing of translational and rotational ground motion. , 2017, , .		7
39	Spatial Wavefield Gradient Data in Seismic Exploration. , 2017, , .		2
40	Wavefield Separation of Multicomponent Land Seismic Data Using Spatial Wavefield Gradients. , 2016, , .		8
41	Finite Difference Modelling of Wavefield Constituents. , 2016, , .		1
42	Single-component elastic wavefield separation at the free surface using source- and receiver-side gradients. , 2016, , .		8
43	Frequency-dependent traveltime tomography using fat rays: application to near-surface seismic imaging. Journal of Applied Geophysics, 2016, 131, 202-213.	2.1	8
44	Advanced seismic processing/imaging techniques and their potential for geothermal exploration. Interpretation, 2016, 4, SR1-SR18.	1.1	22
45	The shallow elastic structure of the lunar crust: New insights from seismic wavefield gradient analysis. Geophysical Research Letters, 2016, 43, 10,078.	4.0	38
46	Seismic imaging of a megathrust splay fault in the North Chilean subduction zone (Central Andes). Tectonophysics, 2016, 689, 157-166.	2.2	6
47	Microseismic reflection imaging of the Central Andean crust. Geophysical Journal International, 2016, 204, 1396-1404.	2.4	10
48	9C seismic data acquisition for near-surface applications: recording, waveform reciprocity and 4C rotation. , 2016, , .		7
49	Efficient Deconvolution of Ground-Penetrating Radar Data. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 5209-5217.	6.3	22
50	Finite-difference modelling of wavefield constituents. Geophysical Journal International, 2015, 203, 1334-1342.	2.4	30
51	Geophone Coupling Corrections for Land-seismic Point Receiver Acquisition. , 2015, , .		2
52	Understanding the Impact of Karst on Seismic Wave Propagation - A Multi-method Geophysical Study. , 2015, , .		5
53	Constraining helicopter electromagnetic models of the Okavango Delta with seismic-refraction and seismic-reflection data. Geophysics, 2014, 79, B123-B134.	2.6	9
54	Characterizing Sagging and Collapse Sinkholes in a Mantled Karst by Means of Ground Penetrating Radar (GPR). Environmental and Engineering Geoscience, 2014, 20, 109-132.	0.9	55

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55	Multi-method geophysical imaging of a Quaternary valley in northern Switzerland. , 2014, , .		2
56	Three-dimensional Ground-penetrating Radar and Magnetic-gradient Surveying of the Roman Castle Irgenhausen (Switzerland). , 2014, , .		0
57	High-resolution water content estimation from surface-based ground-penetrating radar reflection data by impedance inversion. Water Resources Research, 2012, 48, .	4.2	38
58	Bayesian frequency-domain blind deconvolution of ground-penetrating radar data. Journal of Applied Geophysics, 2011, 75, 615-630.	2.1	14
59	Three-dimensional hydrostratigraphic models from ground-penetrating radar and direct-push data. Journal of Hydrology, 2011, 398, 235-245.	5.4	37
60	Bayesian Frequency-domain Mixed-phase Wavelet Estimation and Deconvolution. , 2011, , .		1
61	Mixed-phase Deconvolution of Ground-penetrating Radar Data. , 2010, , .		0
62	Traveltime tomographic inversion with simultaneous static corrections " Well worth the effort. Geophysics, 2009, 74, WCB25-WCB33.	2.6	19
63	3D constraints on a possible deep >2.5 km massive sulphide mineralization from 2D crooked-line seismic reflection data in the Kristineberg mining area, northern Sweden. Tectonophysics, 2009, 479, 223-240.	2.2	46
64	<i>P</i> - and <i>S</i> - <i>V</i> -velocity structure of the South Portuguese Zone fold-and-thrust belt, SW Iberia, from traveltime tomography. Geophysical Journal International, 2008, 175, 689-712.	2.4	19
65	Seismic reflection imaging over the South Portuguese Zone fold-and-thrust belt, SW Iberia. Journal of Geophysical Research, 2008, 113, .	3.3	21
66	Prestack and poststack migration of crooked-line seismic reflection data: A case study from the South Portuguese Zone fold belt, southwestern Iberia. Geophysics, 2007, 72, B9-B18.	2.6	27
67	Shallow 3D seismic-reflection imaging of fracture zones in crystalline rock. Geophysics, 2007, 72, B149-B160.	2.6	31
68	High-resolution 3D seismic imaging of the upper crystalline crust at a nuclear waste disposal study site on Åvrå Island, southeastern Sweden. , 2006, , .		0
69	Ultra-shallow seismic reflection imaging in a region characterized by high source-generated noise. Near Surface Geophysics, 2005, 3, 33-46.	1.2	33