Martin Schimmel

List of Publications by Year
in descending order

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97 papers	4,364 citations	117625 34 h-index	114465 63 g-index
119 all docs	119 docs citations	119 times ranked	2973 citing authors

#	Article	IF	Citations
1	Noise reduction and detection of weak, coherent signals through phase-weighted stacks. Geophysical Journal International, 1997, 130, 497-505.	2.4	408
2	Ocean wave sources of seismic noise. Journal of Geophysical Research, 2011, 116, .	3.3	246
3	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	12.9	207
4	Using instantaneous phase coherence for signal extraction from ambient noise data at a local to a global scale. Geophysical Journal International, 2011, 184, 494-506.	2.4	194
5	The seismicity of Mars. Nature Geoscience, 2020, 13, 205-212.	12.9	194
6	Seismic detection of the martian core. Science, 2021, 373, 443-448.	12.6	169
7	The S-Transform From a Wavelet Point of View. IEEE Transactions on Signal Processing, 2008, 56, 2771-2780.	5.3	146
8	Thickness and structure of the martian crust from InSight seismic data. Science, 2021, 373, 438-443.	12.6	140
9	Global climate imprint on seismic noise. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	112
10	Modelling long-term seismic noise in various environments. Geophysical Journal International, 2012, 191, 707-722.	2.4	104
11	The inverse S-transform in filters with time-frequency localization. IEEE Transactions on Signal Processing, 2005, 53, 4417-4422.	5.3	102
12	Frequency-dependent phase coherence for noise suppression in seismic array data. Journal of Geophysical Research, 2007, 112, .	3.3	98
13	Phase cross-correlations: Design, comparisons, and applications. Bulletin of the Seismological Society of America, 1999, 89, 1366-1378.	2.3	97
14	Polarized Earth's ambient microseismic noise. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	88
15	Modelling secondary microseismic noise by normal mode summation. Geophysical Journal International, 2013, 193, 1732-1745.	2.4	86
16	Intraplate seismicity in SE Brazil: stress concentration in lithospheric thin spots. Geophysical Journal International, 2004, 159, 390-399.	2.4	78
17	Detection, Analysis, and Removal of Glitches From InSight's Seismic Data From Mars. Earth and Space Science, 2020, 7, e2020EA001317.	2.6	75
18	The S-Transform and Its Inverses: Side Effects of Discretizing and Filtering. IEEE Transactions on Signal Processing, 2007, 55, 4928-4937.	5.3	74

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19	The deep seismic reflection MARCONI-3 profile: Role of extensional Mesozoic structure during the Pyrenean contractional deformation at the eastern part of the Bay of Biscay. Marine and Petroleum Geology, 2008, 25, 714-730.	3.3	74
20	Modelling the ocean site effect on seismic noise body waves. Geophysical Journal International, 2014, 197, 1096-1106.	2.4	74
21	Global tomography using seismic hum. Geophysical Journal International, 2016, 204, 1222-1236.	2.4	70
22	Companion guide to the marsquake catalog from InSight, Sols 0â€“478: Data content and non-seismic events. Physics of the Earth and Planetary Interiors, 2021, 310, 106597.	1.9	64
23	The tailings dam failure of 5 November 2015 in SE Brazil and its preceding seismic sequence. Geophysical Research Letters, 2016, 43, 4929-4936.	4.0	58
24	Upper-mantle seismic structure beneath SE and Central Brazil from P- and S-wave regional traveltime tomography. Geophysical Journal International, 2011, 184, 268-286.	2.4	57
25	How moderate sea states can generate loud seismic noise in the deep ocean. Geophysical Research Letters, 2012, 39, .	4.0	57
26	The use of instantaneous polarization attributes for seismic signal detection and image enhancement. Geophysical Journal International, 2003, 155, 653-668.	2.4	56
27	Seismic velocity anomalies beneath SE Brazil fromPandSwave travel time inversions. Journal of Geophysical Research, 2003, 108, .	3.3	54
28	Degree of Polarization Filter for Frequency-Dependent Signal Enhancement Through Noise Suppression. Bulletin of the Seismological Society of America, 2004, 94, 1016-1035.	2.3	44
29	Ray-theoretical modeling of secondary microseismPwaves. Geophysical Journal International, 2016, 206, 1730-1739.	2.4	44
30	Extracting surface waves, hum and normal modes: time-scale phase-weighted stack and beyond. Geophysical Journal International, 2017, 211, 30-44.	2.4	44
31	The structure and kinematics of the central Taiwan mountain belt derived from geological and seismicity data. Tectonics, 2012, 31, .	2.8	43
32	Detection of microseismic compressional (P) body waves aided by numerical modeling of oceanic noise sources. Journal of Geophysical Research: Solid Earth, 2013, 118, 4312-4324.	3.4	43
33	Mapping the Basement of the Ebro Basin in Spain With Seismic Ambient Noise Autocorrelations. Journal of Geophysical Research: Solid Earth, 2018, 123, 5052-5067.	3.4	43
34	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.	2.3	42
35	Autocorrelation of the Ground Vibrations Recorded by the SEISâ€InSight Seismometer on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006498.	3.6	34
36	Emphasizing Difficulties in the Detection of Rhythms with Lomb-Scargle Periodograms. Biological Rhythm Research, 2001, 32, 341-346.	0.9	33

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37	The Polarization of Ambient Noise on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006545.	3.6	33
38	Seismic Noise Autocorrelations on Mars. Earth and Space Science, 2021, 8, e2021EA001755.	2.6	31
39	Resonances and Lander Modes Observed by InSight on Mars (1â€“9ÂHz). Bulletin of the Seismological Society of America, 2021, 111, 2924-2950.	2.3	30
40	Upper and Middle Crustal Velocity Structure of the Colombian Andes From Ambient Noise Tomography: Investigating Subductionâ€Related Magmatism in the Overriding Plate. Journal of Geophysical Research: Solid Earth, 2018, 123, 1459-1485.	3.4	29
41	Detecting and Locating Precursory Signals During the 2011 El Hierro, Canary Islands, Submarine Eruption. Geophysical Research Letters, 2018, 45, 10,288.	4.0	29
42	The Far Side of Mars: Two Distant Marsquakes Detected by InSight. The Seismic Record, 2022, 2, 88-99.	3.1	29
43	Observation of deep water microseisms in the North Atlantic Ocean using tide modulations. Geophysical Research Letters, 2015, 42, 316-322.	4.0	28
44	On the TT-Transform and Its Diagonal Elements. IEEE Transactions on Signal Processing, 2008, 56, 5709-5713.	5.3	27
45	Shortâ€•and Longâ€Term Variations in the Reykjanes Geothermal Reservoir From Seismic Noise Interferometry. Geophysical Research Letters, 2019, 46, 5788-5798.	4.0	27
46	Reconstruction of annual winter rainfall since A.D.1579 in central-eastern Spain based on calcite laminated sediment from Lake La Cruz. Climatic Change, 2011, 107, 343-361.	3.6	26
47	Lowâ€Frequency Ambient Noise Autocorrelations: Waveforms and Normal Modes. Seismological Research Letters, 2018, 89, 1488-1496.	1.9	26
48	Frequencyâ€dependent noise sources in the North Atlantic Ocean. Geochemistry, Geophysics, Geosystems, 2013, 14, 5341-5353.	2.5	25
49	Sources of secondary microseisms in the Indian Ocean. Geophysical Journal International, 2015, 202, 1180-1189.	2.4	25
50	Rayleigh-Wave, Group-Velocity Tomography of the Borborema Province, NE Brazil, from Ambient Seismic Noise. Pure and Applied Geophysics, 2015, 172, 1429-1449.	1.9	25
51	Seismometers Within Cities: A Tool to Connect Earth Sciences and Society. Frontiers in Earth Science, 2020, 8, .	1.8	24
52	Detection of Subtle Hydromechanical Medium Changes Caused By a Small-Magnitude Earthquake Swarm in NE Brazil. Pure and Applied Geophysics, 2016, 173, 1097-1113.	1.9	22
53	Evidence for crustal seismic anisotropy at the InSight lander site. Earth and Planetary Science Letters, 2022, 593, 117654.	4.4	21
54	Measuring Group Velocity in Seismic Noise Correlation Studies Based on Phase Coherence and Resampling Strategies. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 1928-1935.	6.3	18

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55	Causes of intraplate seismicity in central Brazil from travel time seismic tomography. Tectonophysics, 2016, 680, 1-7.	2.2	17
56	Lithospheric image of the Central Iberian Zone (Iberian Massif) using global-phase seismic interferometry. Solid Earth, 2019, 10, 1937-1950.	2.8	17
57	The upper-mantle transition zone beneath the Ibero-Maghrebian region as seen by teleseismic Pds phases. Tectonophysics, 2015, 663, 212-224.	2.2	16
58	Ambient seismic noise tomography of SW Iberia integrating seafloor- and land-based data. Tectonophysics, 2017, 700-701, 131-149.	2.2	16
59	ConstrainingS-wave velocity using Rayleigh wave ellipticity from polarization analysis of seismic noise. Geophysical Journal International, 2019, 216, 1817-1830.	2.4	16
60	MSS/1: Singleâ€Station and Singleâ€Event Marsquake Inversion. Earth and Space Science, 2020, 7, e2020EA001118.	2.6	16
61	Towards the Processing of Large Data Volumes with Phase Crossâ€Correlation. Seismological Research Letters, 0, , .	1.9	14
62	The Effect of Water Column Resonance on the Spectra of Secondary Microseism P Waves. Journal of Geophysical Research: Solid Earth, 2017, 122, 8121-8142.	3.4	13
63	Steeply reflectedScSHprecursors from the Dâ€³ region. Journal of Geophysical Research, 1996, 101, 16077-16087.	3.3	12
64	Window length selection for optimum slowness resolution of the local-slant-stack transform. Geophysics, 2012, 77, V31-V40.	2.6	12
65	How much averaging is necessary to cancel out cross-terms in noise correlation studies?. Geophysical Journal International, 2015, 203, 1096-1100.	2.4	12
66	Crustal structure beneath Tierra del Fuego, Argentina, inferred from seismic P-wave receiver functions and ambient noise autocorrelations. Tectonophysics, 2019, 751, 41-53.	2.2	12
67	Authors' Reply to Comments on â€œThe Inverse S-Transform in Filters With Time-Frequency Localizationâ€• IEEE Transactions on Signal Processing, 2007, 55, 5120-5121.	5.3	11
68	Retrieval of Body-Wave Reflections Using Ambient Noise Interferometry Using a Small-Scale Experiment. Pure and Applied Geophysics, 2018, 175, 2009-2022.	1.9	11
69	Studying the 410-km and 660-km discontinuities beneath Spain and Morocco through detection of P-to-s conversions. Geophysical Journal International, 2013, 194, 920-935.	2.4	10
70	Crustal Velocity Anomalies in Costa Rica from Ambient Noise Tomography. Pure and Applied Geophysics, 2020, 177, 941-960.	1.9	10
71	Statistical redundancy of instantaneous phases: theory and application to the seismic ambient wavefield. Geophysical Journal International, 2016, 204, 1159-1163.	2.4	8
72	Characterization of Microseismic Noise in Cape Verde. Bulletin of the Seismological Society of America, 2019, 109, 1099-1109.	2.3	8

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73	What can seismic noise tell us about the Alpine reactivation of the Iberian Massif? An example in the Iberian Central System. Solid Earth, 2020, 11, 2499-2513.	2.8	8
74	Four decades of geophysical research on Iberia and adjacent margins. Earth-Science Reviews, 2021, 222, 103841.	9.1	8
75	Reverse time migration using phase crosscorrelation. Geophysics, 2018, 83, S345-S354.	2.6	7
76	Marsâ€™ Background Free Oscillations. Space Science Reviews, 2019, 215, 1.	8.1	7
77	Sparsity-Promoting Approach to Polarization Analysis of Seismic Signals in the Timeâ€“Frequency Domain. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-11.	6.3	7
78	Upper mantle structure of the Borborema Province, NE Brazil, from P-wave tomography: Implications for rheology and volcanism. Geophysical Journal International, 0, , .	2.4	6
79	Imaging the crust and uppermost mantle structure of Portugal (West Iberia) with seismic ambient noise. Geophysical Journal International, 2022, 230, 1106-1120.	2.4	6
80	Rescuing Rhythms from Noise: A New Method of Analysis. Biological Rhythm Research, 2001, 32, 271-284.	0.9	5
81	Circadian and Ultradian Rhythmicities in Very Premature Neonates Maintained in Incubators. Biological Rhythm Research, 2002, 33, 83-112.	0.9	5
82	An alternative inverse S-transform for filters with time-frequency localization. Proc Int Symp Image Signal Process Anal, 2005, , .	0.0	5
83	Preparing for InSight: Evaluation of the Blind Test for Martian Seismicity. Seismological Research Letters, 0, , .	1.9	5
84	Urban seismic monitoring in BrasÃ‌ia, Brazil. PLoS ONE, 2021, 16, e0253610.	2.5	5
85	Uppermost crustal structure regulates the flow of the Greenland Ice Sheet. Nature Communications, 2021, 12, 7307.	12.8	5
86	Crustal and uppermost mantle structure of Cape Verde from ambient noise tomography. Geophysical Journal International, 2022, 231, 1421-1433.	2.4	5
87	Blind source separation of temporally independent microseisms. Geophysical Journal International, 2019, 216, 1260-1275.	2.4	4
88	The Issue of Significant Features in Random Noise. Biological Rhythm Research, 2001, 32, 355-360.	0.9	3
89	Microseismic noise in the Saint Peter and Saint Paul Archipelago, equatorial Atlantic. Journal of South American Earth Sciences, 2017, 80, 304-315.	1.4	3
90	Rayleigh waves from correlation of seismic noise in Great Island of Tierra del Fuego, Argentina: Constraints on upper crustal structure. Geodesy and Geodynamics, 2018, 9, 2-12.	2.2	3

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91	Towards a Digital Twin of the Earth System: Geo-Soft-CoRe, a Geoscientific Software & Code Repository. Frontiers in Earth Science, 2022, 10, .	1.8	1
92	Monitoring medium changes in an intraplate setting with coda wave interferometry. , 2013, , .		0
93	Enhancing stratigraphic and structural features in RTM-images employing phase crosscorrelation. , 2016, , .		0
94	Local Time Slowness Adaptive Filter and Optimal Window Strategies. , 2010, , .		0
95	ReconstruÃ§Ã£o do sinal sÃsmico no Nordeste do Brasil a partir de correlaÃ§Ãµes cruzadas do ruÃdo sÃsmico de ambiente. , 2013, , .		0
96	Resultados preliminares do estudo da metodologia de tomografia sÃsmica de ruÃdo ambiental aplicada Ã escala rasa. , 0, , .		0
97	Reflection response of the ParnaÃba Basin from autocorrelation of seismic ambient noise recordings. , 2017, , .		0