Frank Scherbaum

List of Publications by Year
in descending order

117	6,906	46	79
papers	citations	h-index	g-index
		50273	64791
118	118	118	3890
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Variability of Ground-Motion Prediction Models and Its Components. Seismological Research Letters, 2010, 81, 794-801.	1.9	454
2	Scaling Relations of Earthquake Source Parameter Estimates with Special Focus on Subduction Environment. Bulletin of the Seismological Society of America, 2010, 100, 2914-2926.	2.3	317
3	Criteria for Selecting and Adjusting Ground-Motion Models for Specific Target Regions: Application to Central Europe and Rock Sites. Journal of Seismology, 2006, 10, 137-156.	1.3	316
4	On the Use of Logic Trees for Ground-Motion Prediction Equations in Seismic-Hazard Analysis. Bulletin of the Seismological Society of America, 2005, 95, 377-389.	2.3	298
5	Determination of shallow shear wave velocity profiles in the Cologne, Germany area using ambient vibrations. Geophysical Journal International, 2003, 152, 597-612.	2.4	285
6	Model Selection in Seismic Hazard Analysis: An Information-Theoretic Perspective. Bulletin of the Seismological Society of America, 2009, 99, 3234-3247.	2.3	271
7	On the Selection of Ground-Motion Prediction Equations for Seismic Hazard Analysis. Seismological Research Letters, 2010, 81, 783-793.	1.9	244
8	Toward a ground-motion logic tree for probabilistic seismic hazard assessment in Europe. Journal of Seismology, 2012, 16, 451-473.	1.3	176
9	The Use and Misuse of Logic Trees in Probabilistic Seismic Hazard Analysis. Earthquake Spectra, 2008, 24, 997-1009.	3.1	174
10	Loveâ€™s formula and H/V-ratio (ellipticity) of Rayleigh waves. Wave Motion, 2004, 40, 57-67.	2.0	166
11	On the Conversion of Source-to-Site Distance Measures for Extended Earthquake Source Models. Bulletin of the Seismological Society of America, 2004, 94, 1053-1069.	2.3	135
12	Application of Single-Station Sigma and Site-Response Characterization in a Probabilistic Seismic-Hazard Analysis for a New Nuclear Site. Bulletin of the Seismological Society of America, 2014, 104, 1601-1619.	2.3	133
13	Estimating Background Activity Based on Interevent-Time Distribution. Bulletin of the Seismological Society of America, 2006, 96, 313-320.	2.3	129
14	How useful are complex flood damage models?. Water Resources Research, 2014, 50, 3378-3395.	4.2	124
15	First Comparison of Array-Derived Rotational Ground Motions with Direct Ring Laser Measurements. Bulletin of the Seismological Society of America, 2006, 96, 2059-2071.	2.3	115
16	Combined inversion for the threeâ€dimensional <i>Q</i> structure and source parameters using microearthquake spectra. Journal of Geophysical Research, 1990, 95, 12423-12438.	3.3	112
17	On the Relationship between Fourier and Response Spectra: Implications for the Adjustment of Empirical Groundâ€Motion Prediction Equations (GMPEs). Bulletin of the Seismological Society of America, 2016, 106, 1235-1253.	2.3	110
18	Seismic slip on a low angle normal fault in the Gulf of Corinth: Evidence from high-resolution cluster analysis of microearthquakes. Geophysical Research Letters, 1996, 23, 1817-1820.	4.0	106

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19	Composite Ground-Motion Models and Logic Trees: Methodology, Sensitivities, and Uncertainties. Bulletin of the Seismological Society of America, 2005, 95, 1575-1593.	2.3	104
20	Assessing the reliability of the modified three-component spatial autocorrelation technique. Geophysical Journal International, 2007, 168, 779-796.	2.4	93
21	A natural and controlled source seismic profile through the Eastern Alps: TRANSALP. Earth and Planetary Science Letters, 2004, 225, 115-129.	4.4	89
22	Double beam imaging: Mapping lower mantle heterogeneities using combinations of source and receiver arrays. Journal of Geophysical Research, 1997, 102, 507-522.	3.3	87
23	On the Discrepancy of Recent European Ground-Motion Observations and Predictions from Empirical Models: Analysis of KiK-net Accelerometric Data and Point-Sources Stochastic Simulations. Bulletin of the Seismological Society of America, 2008, 98, 2244-2261.	2.3	85
24	Information-Theoretic Selection of Ground-Motion Prediction Equations for Seismic Hazard Analysis: An Applicability Study Using Californian Data. Bulletin of the Seismological Society of America, 2009, 99, 3248-3263.	2.3	85
25	Development of a Response Spectral Groundâ€Motion Prediction Equation (GMPE) for Seismicâ€Hazard Analysis from Empirical Fourier Spectral and Duration Models. Bulletin of the Seismological Society of America, 2015, 105, 2192-2218.	2.3	83
26	Bayesian network learning for natural hazard analyses. Natural Hazards and Earth System Sciences, 2014, 14, 2605-2626.	3.6	81
27	Unsupervised pattern recognition in continuous seismic wavefield records using Self-Organizing Maps. Geophysical Journal International, 2010, 182, 1619-1630.	2.4	80
28	Spectral analysis of harmonic tremor signals at Mt. Semeru Volcano, Indonesia. Geophysical Research Letters, 1995, 22, 1685-1688.	4.0	78
29	A SSHAC Level 3 Probabilistic Seismic Hazard Analysis for a New-Build Nuclear Site in South Africa. Earthquake Spectra, 2015, 31, 661-698.	3.1	77
30	Title is missing!. Journal of Seismology, 2001, 5, 157-179.	1.3	72
31	ON THE RESOLUTION OF H/V MEASUREMENTS TO DETERMINE SEDIMENT THICKNESS, A CASE STUDY ACROSS A NORMAL FAULT IN THE LOWER RHINE EMBAYMENT, GERMANY. Journal of Earthquake Engineering, 2004, 8, 909-926.	2.5	72
32	Testing the Global Applicability of Ground-Motion Prediction Equations for Active Shallow Crustal Regions. Bulletin of the Seismological Society of America, 2012, 102, 707-721.	2.3	71
33	Comparisons among the five ground-motion models developed using RESORCE for the prediction of response spectral accelerations due to earthquakes in Europe and the Middle East. Bulletin of Earthquake Engineering, 2014, 12, 341-358.	4.1	71
34	On the relationship of peaks and troughs of the ellipticity (H/V) of Rayleigh waves and the transmission response of single layer over half-space models. Geophysical Journal International, 2011, 184, 793-800.	2.4	70
35	Fourier spectral- and duration models for the generation of response spectra adjustable to different source-, propagation-, and site conditions. Bulletin of Earthquake Engineering, 2014, 12, 467-493.	4.1	70
36	Double beam analysis of anomalies in the coreâ€mantle boundary region. Geophysical Research Letters, 1993, 20, 1475-1478.	4.0	65

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37	Inversion of full seismogram envelopes based on the parabolic approximation: Estimation of randomness and attenuation in southeast Honshu, Japan. Journal of Geophysical Research, 1991, 96, 2223-2232.	3.3	63
38	The design of optimum networks for aftershock recordings. Geophysical Journal International, 1994, 117, 716-726.	2.4	62
39	Logic Tree Branch Weights and Probabilities: Summing up to One is not Enough. Earthquake Spectra, 2011, 27, 1237-1251.	3.1	61
40	Anatomy of the Dead Sea Transform from lithospheric to microscopic scale. Reviews of Geophysics, 2009, 47, .	23.0	56
41	Seismic imaging of the site response using microearthquake recordings. Part I. Method. Bulletin of the Seismological Society of America, 1987, 77, 1905-1923.	2.3	53
42	Characterization of dispersive surface waves using continuous wavelet transforms. Geophysical Journal International, 2005, 163, 463-478.	2.4	50
43	Modeling of Wave Dispersion Using Continuous Wavelet Transforms. Pure and Applied Geophysics, 2005, 162, 843-855.	1.9	50
44	Characterization of polarization attributes of seismic waves using continuous wavelet transforms. Geophysics, 2006, 71, V67-V77.	2.6	50
45	Acoustic simulation of P-wave propagation in a heterogeneous spherical earth: numerical method and application to precursor waves to PKPdf. Geophysical Journal International, 2000, 141, 307-320.	2.4	49
46	Modeling of seismic guided waves at the Dead Sea Transform. Journal of Geophysical Research, 2003, 108, .	3.3	47
47	Seismic imaging of the site response using microearthquake recordings. Part II. Application to the Swabian Jura, southwest Germany, Seismic network. Bulletin of the Seismological Society of America, 1987, 77, 1924-1944.	2.3	47
48	The Estimation of Minimum-Misfit Stochastic Models from Empirical Ground-Motion Prediction Equations. Bulletin of the Seismological Society of America, 2006, 96, 427-445.	2.3	46
49	Mid mantle scatterers near the Mariana Slab detected with a double array method. Geophysical Research Letters, 2001, 28, 667-670.	4.0	45
50	Evidence for normal and inhomogeneous lowermost mantle and core-mantle boundary structure under the Arctic and northern Canada. Geophysical Journal International, 1995, 122, 637-657.	2.4	42
51	The domain of existence of prograde Rayleigh-wave particle motion for simple models. Wave Motion, 2008, 45, 556-564.	2.0	39
52	Exploring the Proximity of Ground-Motion Models Using High-Dimensional Visualization Techniques. Earthquake Spectra, 2010, 26, 1117-1138.	3.1	38
53	A partially non-ergodic ground-motion prediction equation for Europe and the Middle East. Bulletin of Earthquake Engineering, 2016, 14, 2629-2642.	4.1	38
54	Source parameters and scaling laws of the 1978 Swabian Jura (southwest Germany) aftershocks. Bulletin of the Seismological Society of America, 1983, 73, 1321-1343.	2.3	38

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55	FIR filter effects and nucleation phases. Geophysical Journal International, 1997, 130, 661-668.	2.4	37
56	Update of likelihood-based ground-motion model selection for seismic hazard analysis in western central Europe. Bulletin of Earthquake Engineering, 2007, 5, 1-16.	4.1	37
57	Bayesian networks for tsunami early warning. Geophysical Journal International, 2011, 185, 1431-1443.	2.4	37
58	Slowness power spectrum analysis of the coda composition of two microearthquake clusters in northern Switzerland. Physics of the Earth and Planetary Interiors, 1991, 67, 137-161.	1.9	36
59	Basin-related effects on ground motion for earthquake scenarios in the Lower Rhine Embayment. Geophysical Journal International, 2006, 166, 197-212.	2.4	34
60	Instantaneous polarization attributes based on an adaptive approximate covariance method. Geophysics, 2006, 71, V99-V104.	2.6	34
61	Unsupervised feature selection and general pattern discovery using Self-Organizing Maps for gaining insights into the nature of seismic wavefields. Computers and Geosciences, 2009, 35, 1757-1767.	4.2	31
62	Acoustic imaging of earthquake sources from the Chalfant Valley, 1986, aftershock series. Geophysical Journal International, 1994, 119, 260-268.	2.4	29
63	Stochastic source, path and site attenuation parameters and associated variabilities for shallow crustal European earthquakes. Bulletin of Earthquake Engineering, 2017, 15, 4531-4561.	4.1	29
64	Distribution of attenuation in the Kaoiki, Hawaii, source volume estimated by inversion of <i>P</i> wave spectra. Journal of Geophysical Research, 1990, 95, 12439-12448.	3.3	27
65	Selection and ranking of ground motion models for seismic hazard analysis in the Pyrenees. Journal of Seismology, 2007, 11, 87-100.	1.3	26
66	Probabilistic seismic hazard estimation in low-seismicity regions considering non-Poissonian seismic occurrence. Geophysical Journal International, 2006, 164, 543-550.	2.4	25
67	NGA-West2 Empirical Fourier and Duration Models to Generate Adjustable Response Spectra. Earthquake Spectra, 2019, 35, 61-93.	3.1	25
68	Of Poles and Zeros. Modern Approaches in Geophysics, 1996, , .	0.1	24
69	GROUND-MOTION PREDICTION EQUATIONS FOR SOUTHERN SPAIN AND SOUTHERN NORWAY OBTAINED USING THE COMPOSITE MODEL PERSPECTIVE. Journal of Earthquake Engineering, 2006, 10, 33-72.	2.5	22
70	Ground-motion prediction model building: a multilevel approach. Bulletin of Earthquake Engineering, 2015, 13, 2481-2491.	4.1	22
71	Seismic velocities in sedimentary rocks â€” indicators of subsidence and uplift?. Geologische Rundschau: Zeitschrift Fur Allgemeine Geologie, 1982, 71, 519-536.	1.3	20
72	Modelling the Roermond earthquake of 1992 April 13 by stochastic simulation of its high-frequency strong ground motion. Geophysical Journal International, 1994, 119, 31-43.	2.4	20

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73	Evaluating hazard results for Switzerland and how not to do it: A discussion of â€œProblems in the application of the SSHAC probability method for assessing earthquake hazards at Swiss nuclear power plantsâ€• by J-U KlÃ¼gel. Engineering Geology, 2005, 82, 43-55.	6.3	20
74	Derivativeâ€Based Global Sensitivity Analysis: Upper Bounding of Sensitivities in Seismicâ€Hazard Assessment Using Automatic Differentiation. Bulletin of the Seismological Society of America, 2017, 107, 984-1004.	2.3	20
75	Earthquake clusters resulting from delayed rupture propagation in finite fault segments. Journal of Geophysical Research, 2003, 108, ESE 4-1-ESE 4-10.	3.3	19
76	Non-Poissonian earthquake occurrence in coupled stress release models and its effect on seismic hazard. Geophysical Journal International, 2008, 174, 649-658.	2.4	19
77	Modeling the Joint Probability of Earthquake, Site, and Ground-Motion Parameters Using Bayesian Networks. Bulletin of the Seismological Society of America, 2011, 101, 235-249.	2.3	19
78	A Study of the Sensitivity of Response Spectral Amplitudes on Seismological Parameters Using Algorithmic Differentiation. Bulletin of the Seismological Society of America, 2014, 104, 2240-2252.	2.3	19
79	Dynamic Bayesian Networks for Real-Time Classification of Seismic Signals. Lecture Notes in Computer Science, 2007, , 565-572.	1.3	17
80	The Impact of the Spatial Uniform Distribution of Seismicity on Probabilistic Seismic-Hazard Estimation. Bulletin of the Seismological Society of America, 2006, 96, 2465-2471.	2.3	15
81	An Interactive Tool for the Elicitation of Subjective Probabilities in Probabilistic Seismic-Hazard Analysis. Bulletin of the Seismological Society of America, 2013, 103, 2862-2874.	2.3	15
82	Moment release in the Lower Rhine Embayment, Germany: seismological perspective of the deformation process. Geophysical Journal International, 2005, 160, 901-909.	2.4	14
83	Deriving Empirical Ground-Motion Models: Balancing Data Constraints and Physical Assumptions to Optimize Prediction Capability. Bulletin of the Seismological Society of America, 2009, 99, 2335-2347.	2.3	14
84	Combining geophysical data sets to study the dynamics of shallow evaporites in urban environments: application to Hamburg, Germany. Geophysical Journal International, 2010, 181, 154-172.	2.4	14
85	Bayesian frequency-domain blind deconvolution of ground-penetrating radar data. Journal of Applied Geophysics, 2011, 75, 615-630.	2.1	14
86	Monitoring the West Bohemian earthquake swarm in 2008/2009 by a temporary small-aperture seismic array. Journal of Seismology, 2012, 16, 169-182.	1.3	14
87	Mixtures of ground-motion prediction equations as backbone models for a logic tree: an application to the subduction zone in Northern Chile. Bulletin of Earthquake Engineering, 2015, 13, 483-501.	4.1	13
88	The 29 September 1969, Ceres, South Africa, Earthquake: Full Waveform Moment Tensor Inversion for Point Source and Kinematic Source Parameters. Bulletin of the Seismological Society of America, 2014, 104, 576-581.	2.3	12
89	Title is missing!. Journal of Earthquake Engineering, 2004, 8, 909.	2.5	11
90	Statistical analysis of time-dependent earthquake occurrence and its impact on hazard in the low seismicity region Lower Rhine Embayment. Geophysical Journal International, 2007, 171, 797-806.	2.4	11

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91	Statistical analysis of the Central-Europe seismicity. Tectonophysics, 2009, 470, 195-204.	2.2	11
92	Model parameter optimization for site-dependent simulation of ground motion by simulated annealing: Re-evaluation of the Ashigara Valley prediction experiment. Natural Hazards, 1994, 10, 275-296.	3.4	10
93	Probabilistic tsunami threat assessment of 10 recent earthquakes offshore Sumatra. Geophysical Journal International, 2012, 188, 1273-1284.	2.4	9
94	Crustal scattering at the KTB from a combined microearthquake and receiver analysis. Geophysical Journal International, 1999, 136, 57-67.	2.4	8
95	Influence of parameters selection in Chebyshev filters on the strong motion data processing. Bulletin of Earthquake Engineering, 2007, 5, 609-627.	4.1	8
96	Magnitude estimation for microseismicity induced during the KTB 2004/2005 injection experiment. Geophysics, 2011, 76, WC47-WC53.	2.6	7
97	Manifold aligned ground motion prediction equations for regional datasets. Computers and Geosciences, 2014, 69, 72-77.	4.2	7
98	Bayesian Belief Network for Tsunami Warning Decision Support. Lecture Notes in Computer Science, 2009, , 757-768.	1.3	7
99	Zero-phase FIR filters: Blessing or curse?. Eos, 1997, 78, 343.	0.1	6
100	Uncertainty Analysis of Strong-Motion and Seismic Hazard? by R. Sigbjï¿½rnsson and N.N. Ambraseys. Bulletin of Earthquake Engineering, 2004, 2, 261-267.	4.1	6
101	Determination of Â0 and Rock Site Â from Records of the 2008/2009 Earthquake Swarm in Western Bohemia. Seismological Research Letters, 2011, 82, 387-393.	1.9	6
102	Exploring the Dimensionality of Ground-Motion Data by Applying Autoencoder Techniques. Bulletin of the Seismological Society of America, 2021, 111, 1563-1576.	2.3	6
103	Volcanic Tremor Extraction and Earthquake Detection Using Music Information Retrieval Algorithms. Seismological Research Letters, 2021, 92, 3668-3681.	1.9	6
104	The estimation of Green's function from local earthquake recordings and the modelling of the site response. Physics of the Earth and Planetary Interiors, 1985, 38, 189-202.	1.9	5
105	LEVINSON INVERSION OF EARTHQUAKE GEOMETRY SH-TRANSMISSION SEISMOGRAMS IN THE PRESENCE OF NOISE*. Geophysical Prospecting, 1987, 35, 787-802.	1.9	5
106	22 Analysis of digital earthquake signals. International Geophysics, 2002, 81, 349-355.	0.6	5
107	Polarization analyses of broadband seismic data recorded on Stromboli Volcano (Italy) from 1996 to 1999. Geophysical Research Letters, 2002, 29, 29-1-29-4.	4.0	5
108	Dispersion of zero-frequency Rayleigh waves in an isotropic model â€˜Layer over half-spaceâ€™. Geophysical Journal International, 2008, 175, 537-540.	2.4	5

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109	A Naive Bayes Classifier for Intensities Using Peak Ground Velocity and Acceleration. Bulletin of the Seismological Society of America, 2010, 100, 3278-3283.	2.3	5
110	Sensitivity of Probabilistic Seismic Hazard Obtained by Algorithmic Differentiation: A Feasibility Study. Bulletin of the Seismological Society of America, 2015, 105, 1810-1822.	2.3	4
111	Site response modelling by non-linear waveform inversion. Geophysical Research Letters, 1995, 22, 199-202.	4.0	3
112	Estimating polarization attributes with an adaptive covariance method in the wavelet domain. , 2005, , .		2
113	Inverse Problems and Parameter Identification in Image Processing. , 2008, , 111-151.		1
114	Autoencoding Ground Motion Data for Visualisation. Lecture Notes in Computer Science, 2012, , 395-402.	1.3	1
115	COMMENT ON "STABILIZATION OF NORMAL-INCIDENCE SEISMOGRAM INVERSION REMOVING THE NOISE-INDUCED BIAS" BY R.-G. FERBER*. Geophysical Prospecting, 1986, 34, 240-240.	1.9	0
116	Graphical Models as Surrogates for Complex Ground Motion Models. Lecture Notes in Computer Science, 2012, , 188-195.	1.3	0
117	Slow Fourier Transform. Seismological Research Letters, 2013, 84, 251-257.	1.9	0