Sebastian Hainzl

List of Publications by Year
in descending order

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121 papers	4,308 citations	94433 37 h-index	128289 60 g-index
145 all docs	145 docs citations	145 times ranked	2722 citing authors

#	Article	IF	Citations
1	Improving Earthquake Doublet Frequency Predictions by Modified Spatial Trigger Kernels in the Epidemic-Type Aftershock Sequence (ETAS) Model. Bulletin of the Seismological Society of America, 2022, 112, 474-493.	2.3	5
2	ETAS-Approach Accounting for Short-Term Incompleteness of Earthquake Catalogs. Bulletin of the Seismological Society of America, 2022, 112, 494-507.	2.3	9
3	Solving three major biases of the ETAS model to improve forecasts of the 2019 Ridgecrest sequence. Stochastic Environmental Research and Risk Assessment, 2022, 36, 2133-2152.	4.0	6
4	Cyclical geothermal unrest as a precursor to Icelandâ€™s 2021 Fagradalsfjall eruption. Nature Geoscience, 2022, 15, 397-404.	12.9	29
5	A review of source models to further the understanding of the seismicity of the Groningen field. Geologie En Mijnbouw/Netherlands Journal of Geosciences, 2022, 101, .	0.9	5
6	Comment on â€œPotential shortâ€term earthquake forecasting by farm animal monitoringâ€•by Wikelski, Mueller, Scocco, Catorci, Desinov, Belyaev, Keim, Pohlmeier, Fechteler, and Mai. Ethology, 2021, 127, 302-306.	1.1	1
7	Time-dependent and spatiotemporal statistical analysis of intraplate anomalous seismicity: Sarria-Triacastela-BecerreÃ¡ (NW Iberian Peninsula, Spain). Geophysical Journal International, 2021, 225, 477-493.	2.4	6
8	The Growth of Earthquake Clusters. Frontiers in Earth Science, 2021, 9, .	1.8	17
9	Reservoir-Triggered Earthquakes Around the AtatÃ¼rk Dam (Southeastern Turkey). Frontiers in Earth Science, 2021, 9, .	1.8	9
10	Poroelastic model in a vertically sealed gas storage: a case study from cyclic injection/production in a carbonate aquifer. Geophysical Journal International, 2021, 227, 1322-1338.	2.4	5
11	Statistical Seismology. Encyclopedia of Earth Sciences Series, 2021, , 1724-1727.	0.1	0
12	Eruption Interval Monitoring at Strokkur Geyser, Iceland. Geophysical Research Letters, 2020, 47, e2019GL085266.	4.0	18
13	Combined approach of poroelastic and earthquake nucleation applied to the reservoir-induced seismic activity in the Val dâ€™Agri area, Italy. Journal of Rock Mechanics and Geotechnical Engineering, 2020, 12, 802-810.	8.1	17
14	Two global ensemble seismicity models obtained from the combination of interseismic strain measurements and earthquake-catalogue information. Geophysical Journal International, 2020, 224, 1945-1955.	2.4	15
15	Seismicity clusters in Central Chile: investigating the role of repeating earthquakes and swarms in a subduction region. Geophysical Journal International, 2020, 224, 2028-2043.	2.4	8
16	Is Coulomb Stress the Best Choice for Aftershock Forecasting?. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019553.	3.4	10
17	Stress-based, statistical modeling of the induced seismicity at the Groningen gas field, The Netherlands. Environmental Earth Sciences, 2020, 79, 1.	2.7	19
18	Statistical Seismology. Encyclopedia of Earth Sciences Series, 2020, , 1-5.	0.1	0

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19	Linear Relationship Between Aftershock Productivity and Seismic Coupling in the Northern Chile Subduction Zone. Journal of Geophysical Research: Solid Earth, 2019, 124, 8726-8738.	3.4	18
20	Filling the gap in a double seismic zone: Intraslab seismicity in Northern Chile. Lithos, 2019, 346-347, 105155.	1.4	18
21	Fault Parametersâ€Based Earthquake Magnitude Estimation Using Artificial Neural Networks. Seismological Research Letters, 2019, , .	1.9	3
22	A Regionalized Seismicity Model for Subduction Zones Based on Geodetic Strain Rates, Geomechanical Parameters, and Earthquakeâ€Catalog Data. Bulletin of the Seismological Society of America, 2019, 109, 2036-2049.	2.3	4
23	Detection of Gutenbergâ€“Richter bâ€Value Changes in Earthquake Time Series. Bulletin of the Seismological Society of America, 2018, 108, 2778-2787.	2.3	9
24	Review: Can Animals Predict Earthquakes?. Bulletin of the Seismological Society of America, 2018, 108, 1031-1045.	2.3	30
25	Multiple Changeâ€Point Detection in Spatiotemporal Seismicity Data. Bulletin of the Seismological Society of America, 2018, 108, 1147-1159.	2.3	9
26	Localised thickening and grounding of an Antarctic ice shelf from tidal triggering and sizing of cryoseismicity. Earth and Planetary Science Letters, 2018, 503, 78-87.	4.4	7
27	The Forecasting Skill of Physicsâ€Based Seismicity Models during the 2010â€“2012 Canterbury, New Zealand, Earthquake Sequence. Seismological Research Letters, 2018, 89, 1238-1250.	1.9	47
28	A nonplanar slow rupture episode during the 2000 Miyakejima dike intrusion. Journal of Geophysical Research: Solid Earth, 2017, 122, 2054-2068.	3.4	5
29	A Bayesian seismic hazard analysis for the city of Naples. Journal of Geophysical Research: Solid Earth, 2017, 122, 1990-2012.	3.4	3
30	Testing alternative temporal aftershock decay functions in an ETAS framework. Geophysical Journal International, 2017, 210, 585-593.	2.4	4
31	Testing stress shadowing effects at the South American subduction zone. Geophysical Journal International, 2017, 211, 1272-1283.	2.4	6
32	To which level did the 2010ÂM 8.8 Maule earthquake fill the pre-existing seismic gap?. Geophysical Journal International, 2017, 211, 498-511.	2.4	3
33	Statistical analysis of the 2012â€“2013 Torreperogilâ€“Sabiote seismic series, Spain. Journal of Seismology, 2017, 21, 705-717.	1.3	5
34	Spatial Variations of Aftershock Parameters and their Relation to Geodetic Slip Models for the 2010 Mw8.8 Maule and the 2011 Mw9.0 Tohoku-oki Earthquakes. Pure and Applied Geophysics, 2017, 174, 77-102.	1.9	7
35	Effective Stress Drop of Earthquake Clusters. Bulletin of the Seismological Society of America, 2017, 107, 2247-2257.	2.3	15
36	Modeling of Kashmir Aftershock Decay Based on Static Coulomb Stress Changes and Laboratory-Derived Rate-and-State Dependent Friction Law. Pure and Applied Geophysics, 2016, 173, 1559-1574.	1.9	2

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37	Apparent triggering function of aftershocks resulting from rateâ€dependent incompleteness of earthquake catalogs. Journal of Geophysical Research: Solid Earth, 2016, 121, 6499-6509.	3.4	50
38	Uplift rate transients at subduction margins due to earthquake clustering. Tectonics, 2016, 35, 2370-2384.	2.8	31
39	Comment on â€œRevisiting the 1894 Omori Aftershock Dataset with the Stretched Exponential Functionâ€• by A. Mignan. Seismological Research Letters, 2016, 87, 1130-1133.	1.9	4
40	Aftershocks triggered by fluid intrusion: Evidence for the aftershock sequence occurred 2014 in West Bohemia/Vogtland. Journal of Geophysical Research: Solid Earth, 2016, 121, 2575-2590.	3.4	43
41	Rateâ€Dependent Incompleteness of Earthquake Catalogs. Seismological Research Letters, 2016, 87, 337-344.	1.9	99
42	Statistical estimation of the duration of aftershock sequences. Geophysical Journal International, 2016, 205, 1180-1189.	2.4	27
43	Aftershock triggering by postseismic stresses: A study based on Coulomb rateâ€andâ€state models. Journal of Geophysical Research: Solid Earth, 2015, 120, 2388-2407.	3.4	40
44	Discrimination between induced, triggered, and natural earthquakes close to hydrocarbon reservoirs: A probabilistic approach based on the modeling of depletionâ€induced stress changes and seismological source parameters. Journal of Geophysical Research: Solid Earth, 2015, 120, 2491-2509.	3.4	69
45	Quantifying slip balance in the earthquake cycle: Coseismic slip model constrained by interseismic coupling. Journal of Geophysical Research: Solid Earth, 2015, 120, 8383-8403.	3.4	13
46	Aseismic transient driving the swarm-like seismic sequence in the Pollino range, Southern Italy. Geophysical Journal International, 2015, 201, 1553-1567.	2.4	40
47	Maximum Magnitude of Completeness in a Salt Mine. Bulletin of the Seismological Society of America, 2015, 105, 1491-1501.	2.3	4
48	Joint Determination of Slip and Stress Drop in a Bayesian Inversion Approach: A Case Study for the 2010 M8.8 Maule Earthquake. Pure and Applied Geophysics, 2015, 172, 375-388.	1.9	5
49	Static stress triggering explains the empirical aftershock distance decay. Geophysical Research Letters, 2014, 41, 8818-8824.	4.0	21
50	Broadband Ground-Motion Simulation Using Energy-Constrained Rise-Time Scaling. Bulletin of the Seismological Society of America, 2014, 104, 2683-2697.	2.3	6
51	Identification and characterization of growing large-scale en-echelon fractures in a salt mine. Geophysical Journal International, 2014, 196, 1092-1105.	2.4	16
52	Monsoon-induced earthquake activity in Talala, Gujarat, India. Geophysical Journal International, 2014, 200, 627-637.	2.4	29
53	The Largest Expected Earthquake Magnitudes in Japan: The Statistical Perspective. Bulletin of the Seismological Society of America, 2014, 104, 769-779.	2.3	16
54	Assessment of stress coupling among the inter-, co- and post-seismic phases related to the 2004 M6 Parkfield earthquake. Geophysical Journal International, 2014, 197, 1858-1868.	2.4	8

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55	Nontrivial decay of aftershock density with distance in Southern California. Journal of Geophysical Research: Solid Earth, 2014, 119, 5518-5535.	3.4	42
56	Gradual unlocking of plate boundary controlled initiation of the 2014 Iquique earthquake. Nature, 2014, 512, 299-302.	27.8	279
57	Propagation of Coulomb stress uncertainties in physicsâ€based aftershock models. Journal of Geophysical Research: Solid Earth, 2014, 119, 7846-7864.	3.4	37
58	Recommendation for the discrimination of human-related and natural seismicity. Journal of Seismology, 2013, 17, 197-202.	1.3	64
59	The Maximum Earthquake Magnitude in a Time Horizon: Theory and Case Studies. Bulletin of the Seismological Society of America, 2013, 103, 860-875.	2.3	39
60	Impact of Aseismic Transients on the Estimation of Aftershock Productivity Parameters. Bulletin of the Seismological Society of America, 2013, 103, 1723-1732.	2.3	71
61	Improving the estimation of detection probability and magnitude of completeness in strongly heterogeneous media, an application to acoustic emission (AE). Geophysical Journal International, 2013, 193, 1556-1569.	2.4	10
62	Comparison of deterministic and stochastic earthquake simulators for fault interactions in the Lower Rhine Embayment, Germany. Geophysical Journal International, 2013, 195, 684-694.	2.4	7
63	Comment on â€œSelfâ€similar earthquake triggering, BÃ¥th's law, and foreshock/aftershock magnitudes: Simulations, theory, and results forâ€‰southern Californiaâ€•by P. M. Shearer. Journal of Geophysical Research: Solid Earth, 2013, 118, 1188-1191.	3.4	11
64	Seismic moment ratio of aftershocks with respect to main shocks. Journal of Geophysical Research: Solid Earth, 2013, 118, 5856-5864.	3.4	25
65	Investigating the Origin of Seismic Swarms. Eos, 2013, 94, 361-362.	0.1	9
66	Testing atmospheric and tidal earthquake triggering at Mt. Hochstaufen, Germany. Journal of Geophysical Research: Solid Earth, 2013, 118, 5442-5452.	3.4	33
67	Seismicity-based estimation of the driving fluid pressure in the case of swarm activity in Western Bohemia. Geophysical Journal International, 2012, 191, 271-281.	2.4	72
68	Improving empirical aftershock modeling based on additional source information. Journal of Geophysical Research, 2012, 117, .	3.3	27
69	Stressâ€•and aftershockâ€constrained joint inversions for coseismic and postseismic slip applied to the 2004 M6.0 Parkfield earthquake. Journal of Geophysical Research, 2012, 117, .	3.3	20
70	Changes in effective stress during the 2003â€“2004 Ubaye seismic swarm, France. Journal of Geophysical Research, 2011, 116, .	3.3	43
71	A retrospective comparative forecast test on the 1992 Landers sequence. Journal of Geophysical Research, 2011, 116, .	3.3	70
72	Statistical analysis of the induced Basel 2006 earthquake sequence: introducing a probability-based monitoring approach for Enhanced Geothermal Systems. Geophysical Journal International, 2011, 186, 793-807.	2.4	143

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73	Estimation of the Maximum Possible Magnitude in the Framework of a Doubly Truncated Gutenberg-Richter Model. Bulletin of the Seismological Society of America, 2011, 101, 1649-1659.	2.3	62
74	Seismicity, Critical States of: From Models to Practical Seismic Hazard Estimates Space. , 2011, , 805-824.		1
75	Steady-state solutions of rupture propagation in an earthquake simulator governed by rate and state dependent friction. European Physical Journal: Special Topics, 2010, 191, 105-115.	2.6	1
76	Recurrence of Large Earthquakes: Bayesian Inference from Catalogs in the Presence of Magnitude Uncertainties. Pure and Applied Geophysics, 2010, 167, 845-853.	1.9	8
77	Bidirectional and unidirectional fracture growth during hydrofracturing: Role of driving stress gradients. Journal of Geophysical Research, 2010, 115, .	3.3	38
78	Sensitivity study of forecasted aftershock seismicity based on Coulomb stress calculation and rateâ€• and stateâ€dependent frictional response. Journal of Geophysical Research, 2010, 115, .	3.3	58
79	Quantitative earthquake forecasts resulting from static stress triggering. Journal of Geophysical Research, 2010, 115, .	3.3	40
80	Postseismic deformation induced by brittle rock damage of aftershocks. Journal of Geophysical Research, 2010, 115, .	3.3	17
81	Impact of the receiver fault distribution on aftershock activity. Journal of Geophysical Research, 2010, 115, .	3.3	40
82	Correlations of Seismicity Patterns in Southern California with Surface Heat Flow Data. Bulletin of the Seismological Society of America, 2009, 99, 3114-3123.	2.3	48
83	Afterslip and viscoelastic relaxation following the 1999M7.4 Ä°zmit earthquake from GPS measurements. Geophysical Journal International, 2009, 178, 1220-1237.	2.4	98
84	The creation of an asymmetric hydraulic fracture as a result of driving stress gradients. Geophysical Journal International, 2009, 179, 634-639.	2.4	25
85	Statistical analysis of the Central-Europe seismicity. Tectonophysics, 2009, 470, 195-204.	2.2	11
86	Aftershock modeling based on uncertain stress calculations. Journal of Geophysical Research, 2009, 114, .	3.3	68
87	Mechanical intrusion models and their implications for the possibility of magma-driven swarms in NW Bohemia Region. Studia Geophysica Et Geodaetica, 2008, 52, 529-548.	0.5	26
88	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
89	Microseismic signatures of hydraulic fracture growth in sediment formations: Observations and modeling. Journal of Geophysical Research, 2008, 113, .	3.3	78
90	Dependence of the Omoriâ€Utsu law parameters on main shock magnitude: Observations and modeling. Journal of Geophysical Research, 2008, 113, .	3.3	58

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91	Impact of Earthquake Rupture Extensions on Parameter Estimations of Point-Process Models. Bulletin of the Seismological Society of America, 2008, 98, 2066-2072.	2.3	71
92	Recurrent Large Earthquakes in a Fault Region: What Can Be Inferred from Small and Intermediate Events?. Bulletin of the Seismological Society of America, 2008, 98, 2641-2651.	2.3	13
93	Can Strong-Motion Observations be Used to Constrain Probabilistic Seismic-Hazard Estimates?. Bulletin of the Seismological Society of America, 2008, 98, 509-520.	2.3	60
94	Recurrence Time Distributions of Large Earthquakes in a Stochastic Model for Coupled Fault Systems: The Role of Fault Interaction. Bulletin of the Seismological Society of America, 2007, 97, 1679-1687.	2.3	34
95	Estimating recurrence times and seismic hazard of large earthquakes on an individual fault. Geophysical Journal International, 2007, 170, 1300-1310.	2.4	29
96	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
97	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
98	Earthquake activity related to seismic cycles in a model for a heterogeneous strike-slip fault. Tectonophysics, 2006, 423, 137-145.	2.2	33
99	Special Issue Tectonophysics. Tectonophysics, 2006, 423, 1-2.	2.2	4
100	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
101	Probabilistic seismic hazard estimation in low-seismicity regions considering non-Poissonian seismic occurrence. Geophysical Journal International, 2006, 164, 543-550.	2.4	25
102	Evidence for rainfall-triggered earthquake activity. Geophysical Research Letters, 2006, 33, .	4.0	178
103	Estimating Background Activity Based on Interevent-Time Distribution. Bulletin of the Seismological Society of America, 2006, 96, 313-320.	2.3	129
104	Moment release in the Lower Rhine Embayment, Germany: seismological perspective of the deformation process. Geophysical Journal International, 2005, 160, 901-909.	2.4	14
105	Aftershocks resulting from creeping sections in a heterogeneous fault. Geophysical Research Letters, 2005, 32, .	4.0	35
106	Detecting fluid signals in seismicity data through statistical earthquake modeling. Journal of Geophysical Research, 2005, 110, .	3.3	232
107	Seismicity patterns of earthquake swarms due to fluid intrusion and stress triggering. Geophysical Journal International, 2004, 159, 1090-1096.	2.4	132
108	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

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109	Emergence of a band-limited power law in the aftershock decay rate of a slider-block model. Geophysical Research Letters, 2003, 30, .	4.0	26
110	Self-organization of earthquake swarms. Journal of Geodynamics, 2003, 35, 157-172.	1.6	32
111	A systematic spatiotemporal test of the critical point hypothesis for large earthquakes. Geophysical Research Letters, 2002, 29, 53-1.	4.0	57
112	Indications for a successively triggered rupture growth underlying the 2000 earthquake swarm in Vogtland/NW Bohemia. Journal of Geophysical Research, 2002, 107, ESE 5-1-ESE 5-9.	3.3	127
113	A Systematic Test on Precursory Seismic Quiescence in Armenia. Natural Hazards, 2002, 26, 245-263.	3.4	36
114	Observation of growing correlation length as an indicator for critical point behavior prior to large earthquakes. Journal of Geophysical Research, 2001, 106, 2167-2175.	3.3	126
115	The role of disorder and stress concentration in nonconservative fault systems. Physica A: Statistical Mechanics and Its Applications, 2001, 294, 67-84.	2.6	15
116	Detecting premonitory seismicity patterns based on critical point dynamics. Natural Hazards and Earth System Sciences, 2001, 1, 93-98.	3.6	14
117	Seismic quiescence as an indicator for large earthquakes in a system of self-organized criticality. Geophysical Research Letters, 2000, 27, 597-600.	4.0	65
118	Self-organization of spatio-temporal earthquake clusters. Nonlinear Processes in Geophysics, 2000, 7, 21-29.	1.3	27
119	SELF-ORGANIZED CRITICALITY MODEL FOR EARTHQUAKES: QUIESCENCE, FORESHOCKS AND AFTERSHOCKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 2249-2255.	1.7	5
120	Similar power laws for foreshock and aftershock sequences in a spring-block model for earthquakes. Journal of Geophysical Research, 1999, 104, 7243-7253.	3.3	96
121	Weak decays of heavy mesons in the instantaneous Bethe Salpeter approach. Zeitschrift FÃ¼r Physik C-Particles and Fields, 1995, 68, 103-111.	1.5	13