Serge A Shapiro

List of Publications by Year
in descending order

215	7,552	61984
papers	citations	43
		h-index

62596		
80		
g-index		

229	229	229	3610
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modeling the propagation of elastic waves using a modified finite-difference grid. Wave Motion, 2000, 31, 77-92.	2.0	536
2	Estimating the crust permeability from fluid-injection-induced seismic emission at the KTB site. Geophysical Journal International, 1997, 131, F15-F18.	2.4	446
3	Characterization of fluid transport properties of reservoirs using induced microseismicity. Geophysics, 2002, 67, 212-220.	2.6	287
4	Elastic piezosensitivity of porous and fractured rocks. Geophysics, 2003, 68, 482-486.	2.6	255
5	Fluidâ€induced seismicity: Pressure diffusion and hydraulic fracturing. Geophysical Prospecting, 2009, 57, 301-310.	1.9	241
6	Seismogenic index and magnitude probability of earthquakes induced during reservoir fluid stimulations. The Leading Edge, 2010, 29, 304-309.	0.7	212
7	Triggering of Seismicity by Pore-pressure Perturbations: Permeability-related Signatures of the Phenomenon. Pure and Applied Geophysics, 2003, 160, 1051-1066.	1.9	170
8	Generalization of Gassmann equations for porous media saturated with a solid material. Geophysics, 2007, 72, A75-A79.	2.6	168
9	Large-scalein situpermeability tensor of rocks from induced microseismicity. Geophysical Journal International, 1999, 137, 207-213.	2.4	152
10	Poreâ€pressure diffusion: A possible triggering mechanism for the earthquake swarms 2000 in Vogtland/NWâ€Bohemia, central Europe. Geophysical Research Letters, 2003, 30, .	4.0	134
11	Effective velocities in fractured media: a numerical study using the rotated staggered finite-difference grid. Geophysical Prospecting, 2002, 50, 183-194.	1.9	133
12	Seismic imaging of a convergent continental margin and plateau in the central Andes (Andean) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 30	3.3	128
13	Hydraulic-fracturing controlled dynamics of microseismic clouds. Geophysical Research Letters, 2006, 33, .	4.0	117
14	Microseismic monitoring of borehole fluid injections: Data modeling and inversion for hydraulic properties of rocks. Geophysics, 2003, 68, 685-689.	2.6	110
15	Magnitudes of induced earthquakes and geometric scales of fluid-stimulated rock volumes. Geophysics, 2011, 76, WC55-WC63.	2.6	110
16	Porosity and elastic anisotropy of rocks under tectonic stress and pore-pressure changes. Geophysics, 2005, 70, N27-N38.	2.6	109
17	Fracturing of porous rock induced by fluid injection. Tectonophysics, 2011, 503, 129-145.	2.2	109
18	Effective elastic properties of randomly fractured soils: 3D numerical experiments. Geophysical Prospecting, 2004, 52, 183-195.	1.9	108

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19	Poroelastic Backus averaging for anisotropic layered fluidâ€•and gasâ€•saturated sediments. Geophysics, 1997, 62, 1867-1878.	2.6	103
20	Seismic Attenuation By Scattering: Theory and Numerical Results. Geophysical Journal International, 1993, 114, 373-391.	2.4	102
21	Back front of seismicity induced after termination of borehole fluid injection. Geophysical Research Letters, 2004, 31, .	4.0	102
22	Scaling of seismicity induced by nonlinear fluidâ€•rock interaction. Journal of Geophysical Research, 2009, 114, .	3.3	102
23	Characterization of hydraulic properties of rocks using probability of fluid-induced microearthquakes. Geophysics, 2005, 70, F27-F33.	2.6	100
24	Probability of a givenâ€•magnitude earthquake induced by a fluid injection. Geophysical Research Letters, 2007, 34, .	4.0	97
25	Dynamic poroelasticity of thinly layered structures. International Journal of Solids and Structures, 1998, 35, 4739-4751.	2.7	88
26	Microseismic signatures of hydraulic fracture growth in sediment formations: Observations and modeling. Journal of Geophysical Research, 2008, 113, .	3.3	78
27	Inter event times of fluid induced earthquakes suggest their Poisson nature. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	77
28	Variation in dynamic elastic shear modulus of sandstone upon fluid saturation and substitution. Geophysics, 2003, 68, 472-481.	2.6	74
29	Seismic signatures of permeability in heterogeneous porous media. Geophysics, 1999, 64, 99-103.	2.6	73
30	Decay rate of fluid-induced seismicity after termination of reservoir stimulations. Geophysics, 2010, 75, MA53-MA62.	2.6	73
31	Seismotectonic state of reservoirs inferred from magnitude distributions of fluid-induced seismicity. Journal of Seismology, 2013, 17, 13-25.	1.3	71
32	Stress sensitivity of elastic moduli and electrical resistivity in porous rocks. Journal of Geophysics and Engineering, 2004, 1, 1-11.	1.4	66
33	Evidence for triggering of the Vogtland swarms 2000 by pore pressure diffusion. Journal of Geophysical Research, 2005, 110, .	3.3	63
34	Fluid induced seismicity guided by a continental fault: Injection experiment of 2004/2005 at the German Deep Drilling Site (KTB). Geophysical Research Letters, 2006, 33, n/a-n/a.	4.0	63
35	Fast location of seismicity: A migration-type approach with application to hydraulic-fracturing data. Geophysics, 2007, 72, S33-S40.	2.6	63
36	Dynamic-equivalent medium approach for thinly layered saturated sediments. Geophysical Journal International, 1997, 128, F1-F4.	2.4	62

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37	Probability of inducing given-magnitude earthquakes by perturbing finite volumes of rocks. Journal of Geophysical Research: Solid Earth, 2013, 118, 3557-3575.	3.4	58
38	A generalized O'Doherty-Anstey formula for waves in finely layered media. Geophysics, 1994, 59, 1750-1762.	2.6	57
39	Statistics of fracture strength and fluid-induced microseismicity. Journal of Geophysical Research, 2007, 112, .	3.3	54
40	The O'Doherty-Anstey formula and localization of seismic waves. Geophysics, 1993, 58, 736-740.	2.6	50
41	Elastic waves in finely layered sediments: The equivalent medium and generalized O'Doherty-Anstey formulas. Geophysics, 1996, 61, 1282-1300.	2.6	49
42	Scattering of a compressional wave in a poroelastic medium by an ellipsoidal inclusion. Geophysical Journal International, 1998, 133, 91-103.	2.4	49
43	The effect of random isotropic inhomogeneities on the phase velocity of seismic waves. Geophysical Journal International, 1996, 127, 783-794.	2.4	46
44	Temperature dependence of seismic properties in geothermal rocks at reservoir conditions. Geothermics, 2010, 39, 115-123.	3.4	46
45	Watching Dehydration: Seismic Indication for Transient Fluid Pathways in the Oceanic Mantle of the Subducting Nazca Slab. Geochemistry, Geophysics, Geosystems, 2018, 19, 3189-3207.	2.5	46
46	AVO correction for scalar waves in the case of a thinly layered reflector overburden. Geophysics, 1996, 61, 520-528.	2.6	45
47	An approach to upscaling for seismic waves in statistically isotropic heterogeneous elastic media. Geophysics, 2000, 65, 1837-1850.	2.6	44
48	Scattering and diffraction by a single crack: an accuracy analysis of the rotated staggered grid. Geophysical Journal International, 2005, 162, 25-31.	2.4	43
49	Finite-difference modeling of wave propagation on microscale: A snapshot of the work in progress. Geophysics, 2007, 72, SM293-SM300.	2.6	43
50	Acoustic emission induced by pore-pressure changes in sandstone samples. Geophysics, 2011, 76, MA21-MA32.	2.6	43
51	High-resolution image of the North Chilean subduction zone: seismicity, reflectivity and fluids. Geophysical Journal International, 2014, 197, 1744-1749.	2.4	43
52	Seismic effects of viscous Biot-coupling: Finite difference simulations on micro-scale. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	42
53	Predicting permeability and gas production of hydraulically fractured tight sands from microseismic data. Geophysics, 2010, 75, B1-B10.	2.6	42
54	Seismic imaging using microseismic events: Results from the San Andreas Fault System at SAFOD. Journal of Geophysical Research, 2010, 115, .	3.3	40

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55	Stress-dependent anisotropy in transversely isotropic rocks: Comparison between theory and laboratory experiment on shale. Geophysics, 2009, 74, D7-D12.	2.6	38
56	Microseismic estimates of hydraulic diffusivity in case of non-linear fluid-rock interaction. Geophysical Journal International, 2012, 188, 1441-1453.	2.4	37
57	Effects of Parallel Crack Distributions on Effective Elastic Properties - a Numerical Study. International Journal of Fracture, 2003, 124, L171-L178.	2.2	36
58	Numerical considerations of fluid effects on wave propagation: Influence of the tortuosity. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	35
59	Stress impact on elastic anisotropy of triclinic porous and fractured rocks. Journal of Geophysical Research: Solid Earth, 2017, 122, 2034-2053.	3.4	35
60	The surge of earthquakes in Central Oklahoma has features of reservoir-induced seismicity. Scientific Reports, 2018, 8, 11505.	3.3	34
61	Most probable seismic pulses in single realizations of two- and three-dimensional random media. Geophysical Journal International, 2001, 144, 83-95.	2.4	33
62	Effective Elastic Properties of Fractured Rocks: Dynamic vs. Static Considerations. International Journal of Fracture, 2006, 139, 569-576.	2.2	33
63	Three-dimensional seismic imaging of tunnels. International Journal of Rock Mechanics and Minings Sciences, 2012, 49, 12-20.	5.8	33
64	Nonlinear diffusion-based interpretation of induced microseismicity: A Barnett Shale hydraulic fracturing case study. Geophysics, 2013, 78, B211-B226.	2.6	33
65	The reflection seismic survey of project TIPTEQ-the inventory of the Chilean subduction zone at 38.2° S. Geophysical Journal International, 2008, 172, 565-571.	2.4	31
66	Viscoacoustic wave propagation in 2-D random media and separation of absorption and scattering attenuation. Geophysics, 1995, 60, 459-467.	2.6	30
67	Characterization of fluid transport properties of the Hot Dry Rock reservoir Soultz-2000 using induced microseismicity. Journal of Geophysics and Engineering, 2004, 1, 77-83.	1.4	30
68	A statistical model for seismic hazard assessment of hydraulicâ€fracturingâ€induced seismicity. Geophysical Research Letters, 2015, 42, 10,601.	4.0	30
69	Rupture directivity of fluidâ€induced microseismic events: Observations from an enhanced geothermal system. Journal of Geophysical Research: Solid Earth, 2016, 121, 8034-8047.	3.4	30
70	Seismic Images of Accretive and Erosive Subduction Zones from the Chilean Margin. , 2006, , 147-169.		28
71	Reply to comment by F. H. Cornet on 'Large-scale in situ permeability tensor of rocks from induced microseismicity'. Geophysical Journal International, 2000, 140, 470-473.	2.4	26
72	Stress triggering and stress memory observed from acoustic emission records in a salt mine. Geophysical Journal International, 0, 182, 933-948.	2.4	26

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73	Broad depth range seismic imaging of the subducted Nazca Slab, North Chile. Tectonophysics, 2002, 350, 273-282.	2.2	25
74	Quantitative analysis of rock stress heterogeneity: Implications for the seismogenesis of fluid-injection-induced seismicity. Geophysics, 2015, 80, WC73-WC88.	2.6	25
75	Scattering parameters of the lithosphere below the Massif Central, France, from teleseismic wavefield records. Geophysical Journal International, 1998, 134, 187-198.	2.4	24
76	Stress induced elastic anisotropy of the Etnean basalt: Theoretical and laboratory examination. Geophysical Research Letters, 2007, 34, .	4.0	24
77	An inversion for fluid transport properties of three-dimensionally heterogeneous rocks using induced microseismicity. Geophysical Journal International, 2000, 143, 931-936.	2.4	23
78	Reflection Image Spectroscopy across the Andean subduction zone. Tectonophysics, 2009, 472, 51-61.	2.2	23
79	Microseismic reflection imaging and its application to the Basel geothermal reservoir. Geophysics, 2015, 80, WC39-WC49.	2.6	23
80	Gutenberg-Richter relation originates from Coulomb stress fluctuations caused by elastic rock heterogeneity. Journal of Geophysical Research: Solid Earth, 2014, 119, 1220-1234.	3.4	22
81	Seismogenic Index of Underground Fluid Injections and Productions. Journal of Geophysical Research: Solid Earth, 2018, 123, 7983-7997.	3.4	22
82	A statistical model for the seismicity rate of fluid-injection-induced earthquakes. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	20
83	A numerical study on reflection coefficients of fractured media. Geophysics, 2007, 72, D61-D67.	2.6	20
84	Interpretation of Microseismicity Resulting from Gel and Water Fracturing of Tight Gas Reservoirs. Pure and Applied Geophysics, 2010, 167, 169-182.	1.9	19
85	Most probable ballistic waves in random media: a weak-fluctuation approximation and numerical results. Waves in Random and Complex Media, 2002, 12, 223-245.	1.5	19
86	Elastic waves scattering and radiation by fractal inhomogeneity of a medium. Geophysical Journal International, 1992, 110, 591-600.	2.4	18
87	Reflectivity/transmissivity for one-dimensional inhomogeneous random elastic media: dynamic-equivalent-medium approach. Geophysical Journal International, 1996, 126, 184-196.	2.4	18
88	Permeability dependency on stiff and compliant porosities: a model and some experimental examples. Journal of Geophysics and Engineering, 2015, 12, 376-385.	1.4	18
89	From Slab Coupling to Slab Pull: Stress Segmentation in the Subducting Nazca Plate. Geophysical Research Letters, 2018, 45, 5407-5416.	4.0	18
90	Fluids Along the Plate Interface Influencing the Frictional Regime of the Chilean Subduction Zone, Northern Chile. Geophysical Research Letters, 2018, 45, 10,378.	4.0	17

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91	Fluid-Induced Seismicity: Theory, Modeling, and Applications. Journal of Engineering Mechanics - ASCE, 2005, 131, 947-952.	2.9	16
92	Violation of the Kaiser effect by hydraulic-fracturing-related microseismicity. Journal of Geophysics and Engineering, 2007, 4, 378-383.	1.4	16
93	Microseismic rupture propagation imaging. Geophysics, 2015, 80, WC107-WC115.	2.6	16
94	Along–strike variations of crustal reflectivity related to the Andean subduction process. Geophysical Research Letters, 2003, 30, .	4.0	15
95	Amplitude corrections for randomly distributed heterogeneities above a target reflector. Geophysics, 2003, 68, 1497-1502.	2.6	15
96	Microseismic imaging from a single geophone: KTB. , 2010, , .		15
97	Elastic properties of two VTI shale samples as a function of uniaxial stress: Experimental results and application of the porosity-deformation approach. Geophysics, 2017, 82, C201-C210.	2.6	15
98	Statistical properties of reflection traveltimes in 3-D randomly inhomogeneous and anisomeric media. Geophysical Journal International, 2003, 154, 841-851.	2.4	14
99	Amplitude fluctuations due to diffraction and refraction in anisotropic random media: implications for seismic scattering attenuation estimates. Geophysical Journal International, 2003, 155, 139-148.	2.4	14
100	Seismic reflectivity of hydraulic fractures approximated by thin fluid layers. Geophysics, 2013, 78, T79-T87.	2.6	14
101	Scaling of seismicity induced by nonlinear fluid–rock interaction after an injection stop. Journal of Geophysical Research: Solid Earth, 2016, 121, 8154-8174.	3.4	14
102	Intrinsic anisotropy and thin multilayering-two anisotropy effects combined. Geophysical Journal International, 1998, 132, 363-373.	2.4	13
103	Seismic scattering attenuation estimates for the German KTB Area derived from well-log statistics. Geophysical Research Letters, 2001, 28, 3761-3764.	4.0	13
104	Mutual relationship between microseismicity and seismic reflectivity: Case study at the German Continental Deep Drilling Site (KTB). Geophysical Research Letters, 2003, 30, n/a-n/a.	4.0	12
105	Projecting seismicity induced by complex alterations of underground stresses with applications to geothermal systems. Scientific Reports, 2021, 11, 23560.	3.3	12
106	Multiple scattering of seismic waves in multilayered structures. Physics of the Earth and Planetary Interiors, 1997, 104, 147-159.	1.9	11
107	Ultrasonic signal analysis to monitor damage development in short fiber-reinforced polymers. Ultrasonics, 1998, 36, 455-460.	3.9	11
108	Frequency–dependent shear–wave splitting in thinly layered media with intrinsic anisotropy. Geophysics, 1999, 64, 604-608.	2.6	11

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109	Seismogenic plane of the northern Andean Subduction Zone from aftershocks of the Antofagasta (Chile) 1995 earthquake. Geophysical Research Letters, 2002, 29, 105-1-105-4.	4.0	11
110	Understanding of elastic anisotropy of shale under triaxial loading: Porosity-deformation approach. Geophysics, 2016, 81, C163-C175.	2.6	11
111	Fractal properties of fault systems by scattering of body seismic waves. Tectonophysics, 1992, 202, 177-181.	2.2	10
112	Fast repeat-modelling of time-lapse seismograms. Geophysical Prospecting, 2001, 49, 557-569.	1.9	10
113	Scattering attenuation in randomly layered structures with finite lateral extent: A hybrid Q model. Geophysics, 2004, 69, 1530-1534.	2.6	10
114	Back front of seismicity induced by non-linear pore pressure diffusion. Geophysical Prospecting, 2016, 64, 170-191.	1.9	10
115	Microseismic reflection imaging of the Central Andean crust. Geophysical Journal International, 2016, 204, 1396-1404.	2.4	10
116	Modeling fluid injection induced microseismicity in shales. Journal of Geophysics and Engineering, 2018, 15, 234-248.	1.4	10
117	Patterns of Rupture Directivity of Subduction Zone Earthquakes in Northern Chile. Journal of Geophysical Research: Solid Earth, 2018, 123, 10,785.	3.4	10
118	Location of seismicity using Gaussian beam type migration. , 2004, , .		10
119	Attenuation of P-waves due to interlayer fluid flow in hydrate-bearing sediments. Journal of Geophysics and Engineering, 2007, 4, 394-403.	1.4	9
120	Leaky mode: A mechanism of horizontal seismic attenuation in a gas-hydrate-bearing sediment. Geophysics, 2007, 72, E159-E163.	2.6	9
121	Attenuation of Seismic Waves Due to Wave‐Induced Flow and Scattering in Randomly Heterogeneous Poroelastic Continua. Advances in Geophysics, 2008, , 123-166.	2.8	9
122	Temperature-dependent poroelastic and viscoelastic effects on microscale-modelling of seismic reflections in heavy oil reservoirs. Geophysical Journal International, 2009, 176, 822-832.	2.4	9
123	Interpretation of microseismicity induced by time‐dependent injection pressure. , 2010, , .		9
124	Seismic imaging of the geodynamic activity at the western Eger rift in central Europe. Tectonophysics, 2015, 647-648, 105-111.	2.2	9
125	Visualizing effects of anisotropy on seismic moments and their potency-tensor isotropic equivalent. Geophysics, 2018, 83, C85-C97.	2.6	9
126	Stress Drop, Seismogenic Index and Fault Cohesion of Fluid-Induced Earthquakes. Rock Mechanics and Rock Engineering, 2021, 54, 5483-5492.	5.4	9

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127	Magnitude and nucleation time of the 2017 Pohang Earthquake point to its predictable artificial triggering. Nature Communications, 2021, 12, 6397.	12.8	9
128	The Born approximation in the problem of elastic wave scattering by a spherical inhomogeneity in a fluid‐saturated porous medium. Applied Physics Letters, 1992, 61, 1275-1277.	3.3	8
129	Fracture mechanics approach to the problem of subsidence induced by resource extraction. Engineering Fracture Mechanics, 2020, 236, 107173.	4.3	8
130	Magnitude estimation for microseismicity induced during the KTB 2004/2005 injection experiment. Geophysics, 2011, 76, WC47-WC53.	2.6	7
131	A Small CO_2 Leakage May Induce Seismicity on a Sub‐Seismic Fault in a Good‐Porosity Clastic Saline Aquifer. Geophysical Research Letters, 2022, 49, .	4.0	7
132	State of stress and crustal fluid migration related to west-dipping structures in the slab-forearc system in the northern Chilean subduction zone. Geophysical Journal International, 2017, 208, 1403-1413.	2.4	6
133	Estimating statistical parameters of an elastic random medium from traveltime fluctuations of refracted waves. Waves in Random and Complex Media, 2005, 15, 43-60.	2.7	5
134	Stress Drop Variations in the Region of the 2014 M_W8.1 Iquique Earthquake, Northern Chile. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020112.	3.4	5
135	Estimating Rupture Directions from Local Earthquake Data Using the IPOC Observatory in Northern Chile. Seismological Research Letters, 2018, 89, 495-502.	1.9	5
136	Microseismic reservoir characterization: Numerical experiments and case studies. , 2001, , .		4
137	Simulation of the diffraction by single cracks: An accuracy study. , 2002, , .		4
138	Seismic signatures of fluid transport—Introduction. Geophysics, 2002, 67, 197-198.	2.6	4
139	Comment on "Role of seepage forces on seismicity triggering"by Alexander Y. Rozhko. Journal of Geophysical Research, 2012, 117, .	3.3	4
140	Arrival-time picking uncertainty: Theoretical estimations and their application to microseismic data. Geophysics, 2020, 85, U65-U76.	2.6	4
141	An inversion for the permeability tensor by using seismic emission. , 1999, , .		4
142	Active seismic imaging using microseismic events. , 2009, , .		4
143	Two Massive Hydraulic Tests Completed in Deep KTB Pilot Hole. Scientific Drilling, 2006, , .	0.6	4
144	Application of an Arrival Time and Cross Correlation Value-based Location Algorithm to the Basel 1microseismic Data. , 2011, , .		4

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145	The Pressure Dependence of Permeability as a Function of Stiff and Compliant Porosities. , 2013, , .		3
146	Receiver based analysis of microseismic recordings: A tool for assessing quality of time picks and event locations. , 2014, , .		3
147	Stress-dependent permeability versus stiff and compliant porosity: theory and experiments. , 2015, , .		3
148	Understanding Slow Deformation Before Dynamic Failure. , 2009, , 229-247.		3
149	Reflection coefficients of fractured rocks: A numerical study. , 2004, , .		3
150	Reservoir characterization using passive seismic monitoring: Physical fundamentals and road ahead. , 2004, , .		3
151	Nonlinear diffusion estimates from hydraulic fracturing of shales. , 2011, , .		3
152	Microseismic monitoring of borehole fluid injections: Data modeling and inversion for hydraulic properties of rocks. , 2002, , .		2
153	Microseismicity induced by hydraulic fracturing: Evaluation and interpretation in terms of the Kaiser effect. , 2007, , .		2
154	Temperatureâ€dependent fluid substitution analysis of geothermal rocks at inâ€situ reservoir conditions. , 2008, , .		2
155	Waveform similarity analysis at Cotton Valley, Texas. , 2011, , .		2
156	Performance test of the Seismogenic index model for forecasting magnitude distributions of fluid-injection-induced seismicity. , 2016, , .		2
157	Understanding Vectorial Migration Patterns of Wastewater-Induced Earthquakes in the United States. Bulletin of the Seismological Society of America, 2020, 110, 2295-2307.	2.3	2
158	Interpretation of Microseismicity Induced by a Gel and a Water Fracturing in Tight Gas Reservoir. , 2008, , .		2
159	Seismicity Based Reservoir Characterization of Basel Geothermal Site. , 2009, , .		2
160	A numerical study of effective velocities in fractured media using the rotated staggered finite difference grid. , 2000, , .		1
161	Application of the piezosensitivity approach: Changes of elastic moduli of isotropic and anisotropic porous rocks under isostatic loads. , 2003, , .		1
162	Hydraulic diffusivity estimations based on the seismicity rate of fluidâ€injectionâ€induced earthquakes. , 2004, , .		1

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163	Determination of criticality and diffusivity heterogeneities based on seismic data analysisâ€"Case study of Vogtland, NW-Bohemia. International Journal of Rock Mechanics and Minings Sciences, 2005, 42, 1088-1093.	5.8	1
164	Effective elastic properties of fractured rocks: Dynamic vs. static considerations. , 2006, , .		1
165	Estimation of the rocks statistical parameters from traveltime measurements. Studia Geophysica Et Geodaetica, 2006, 50, 325-336.	0.5	1
166	Chapter 4 Geometrical Optics of Acoustic Media with Anisometric Random Heterogeneities. Advances in Geophysics, 2008, , 95-121.	2.8	1
167	Induced seismicity after termination of rock stimulations: Possibilities for reservoir characterization. , 2009, , .		1
168	Migration-based location of seismicity recorded with an array installed in the main hole of the San Andreas Fault Observatory at Depth (SAFOD). Geophysical Journal International, 2010, , no-no.	2.4	1
169	Microseismic monitoring of nonâ€linear fluidâ€rock interaction: Hydraulic fracturing of geothermic and hydrocarbon reservoirs. , 2008, , .		1
170	Geometric control of earthquake magnitudes by fluid injections in rocks. , 2011, , .		1
171	Multi-source multi-receiver microseismic reflection imaging: case study Basel. , 2012, , .		1
172	An Approach to Analyse Microseismic Event Similarity. , 2010, , .		1
173	Modelling of Fracture Strength Distribution in Elastically Heterogeneous Rocks. , 2012, , .		1
174	Simulation of effective elastic properties of 3D fractured medium. , 2002, , .		1
175	Wave Propagation in Heterogeneous Media. Part 2: Attenuation of Seismic Waves Due to Scattering. , 2002, , 476-482.		1
176	Influence of nonlinear fluidâ€rock interaction on estimates of hydraulic diffusivity from microseismic data. , 2009, , .		1
177	Estimates of hydraulic transport parameters using microseismicity induced by nonlinear fluidâ€rock interaction. , 2010, , .		1
178	Back front signatures of seismicity induced by nonlinear fluid-rock interaction. , 2012, , .		1
179	Making the Simulation of Monitoring Experiments More Efficient. , 1998, , .		1
180	Fast Repeat-Modelling with Born Approximation. , 1999, , .		1

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181	Geomechanical conditions to create half-moon events during hydraulic fracturing. , 2019, , .		1
182	Dynamic â€•equivalent â€•medium approach for layered saturated and porous sediments. , 1996, , .		0
183	Numerical rock physics: The Gassmann equation. , 2003, , .		0
184	Fluid effects on wave propagation: A numerical study. , 2004, , .		0
185	Numerical Considerations of Fluid Effects on Wave Propagation. , 2005, , 385-394.		0
186	Leaky mode: A horizontal seismic attenuation mechanism in a gas hydrateâ€•bearing sediment. , 2006, , .		0
187	Stress Sensitivity of Seismic and Electric Rock Properties of the Upper Continental Crust at the KTB. Pure and Applied Geophysics, 2006, 163, 1021-1029.	1.9	0
188	Temporal magnitude distribution of seismicity induced by hydraulic stimulations of hydrocarbon and geothermic reservoirs. , 2009, , .		0
189	Scaling of frequency-magnitude distributions of fluid-induced seismicity. , 2014, , .		0
190	Seismicity and linear diffusion of pore pressure. , 0, , 118-163.		0
191	Scaling of seismicity induced after injection stop to better understand hydraulic fracturing processes. , 2016, , .		0
192	Elastic properties of VTI and HTI shale samples as a function of stress: Laboratory measurements versus theoretical modeling. , 2016, , .		0
193	Stress and Pore-Pressure Influence on Elasticity of Arbitrarily Symmetric Porous and Fractured Rocks. , 2017, , .		0
194	Geomechanical stress conditions to induce half-moon events during hydraulic fracturing. Geophysics, 2021, 86, M141-M149.	2.6	0
195	Summary of Project 11172. , 2000, , 26-26.		0
196	True amplitude migration in the presence of a statistically heterogeneous overburden. , 2001, , .		0
197	A numerical study of effective velocities in fractured media: Intersecting and parallel cracks. , 2001, , .		0
198	Wave Propagation in Heterogeneous Media. Part 1: Effective Velocities in Fractured Media. , 2002, , 469-475.		0

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199	A hybrid scattering Q model for randomly layered structures with finite lateral extent. , 2002, , .		0
200	On the stress dependence of seismic velocities in porous rocks. , 2002, , .		0
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203	Viscous fluid effects on wave propagation: a finite‐difference modeling approach in combination with flow simulations. , 2005, , .		0
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