Vaclav Vavrycuk

List of Publications by Year in descending order

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117	4,231	117625	123424
papers	citations	34 h-index	61 g-index

124	124	124	2042
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	3D Heterogeneous Staggered-Grid Finite-Difference Modeling of Seismic Motion with Volume Harmonic and Arithmetic Averaging of Elastic Moduli and Densities. Bulletin of the Seismological Society of America, 2002, 92, 3042-3066.	2.3	355
2	Iterative joint inversion for stress and fault orientations from focal mechanisms. Geophysical Journal International, 2014, 199, 69-77.	2.4	337
3	Inversion for parameters of tensile earthquakes. Journal of Geophysical Research, 2001, 106, 16339-16355.	3.3	224
4	Intra-continental earthquake swarms in West-Bohemia and Vogtland: A review. Tectonophysics, 2014, 611, 1-27.	2.2	177
5	Tensile earthquakes: Theory, modeling, and inversion. Journal of Geophysical Research, 2011, 116, .	3.3	156
6	Moment tensor decompositions revisited. Journal of Seismology, 2015, 19, 231-252.	1.3	147
7	On the retrieval of moment tensors from borehole data. Geophysical Prospecting, 2007, 55, 381-391.	1.9	142
8	Experimental investigation of acoustic emissions and their moment tensors in rock during failure. International Journal of Rock Mechanics and Minings Sciences, 2014, 70, 286-295.	5.8	122
9	Focal mechanisms in anisotropic media. Geophysical Journal International, 2005, 161, 334-346.	2.4	115
10	Non-double-couple earthquakes of 1997 January in West Bohemia, Czech Republic: evidence of tensile faulting. Geophysical Journal International, 2002, 149, 364-373.	2.4	96
11	Principal earthquakes: Theory and observations from the 2008 West Bohemia swarm. Earth and Planetary Science Letters, 2011, 305, 290-296.	4.4	93
12	Non-double-couple mechanisms of microearthquakes induced during the 2000 injection experiment at the KTB site, Germany: A result of tensile faulting or anisotropy of a rock?. Tectonophysics, 2008, 456, 74-93.	2.2	85
13	High-resolution fault image from accurate locations and focal mechanisms of the 2008 swarm earthquakes in West Bohemia, Czech Republic. Tectonophysics, 2013, 590, 189-195.	2.2	82
14	Weak Contrast. Pure and Applied Geophysics, 1998, 151, 699.	1.9	60
15	Focal mechanisms of micro-earthquakes in the DobrÃ¡ Voda seismoactive area in the MalÃ© Karpaty Mts. (Little Carpathians), Slovakia. Tectonophysics, 2010, 492, 213-229.	2.2	59
16	Moment tensor inversion of waveforms: a two-step time-frequency approach. Geophysical Journal International, 2012, 190, 1761-1776.	2.4	55
17	Resolution of non-double-couple components in the seismic moment tensor using regional networksâ€"I: a synthetic case study. Geophysical Journal International, 2014, 196, 1869-1877.	2.4	53
18	Fair ranking of researchers and research teams. PLoS ONE, 2018, 13, e0195509.	2.5	53

#	ARTICLE	IF	CITATIONS
19	Ray velocity and ray attenuation in homogeneous anisotropic viscoelastic media. Geophysics, 2007, 72, D119-D127.	2.6	51
20	Asymptotic Green's function in homogeneous anisotropic viscoelastic media. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 2689-2707.	2.1	50
21	Crustal anisotropy from local observations of shear-wave splitting in West Bohemia, Czech Republic. Bulletin of the Seismological Society of America, 1993, 83, 1420-1441.	2.3	50
22	Ray tracing in anisotropic media with singularities. Geophysical Journal International, 2001, 145, 265-276.	2.4	49
23	Active Magmatic Underplating in Western Eger Rift, Central Europe. Tectonics, 2017, 36, 2846-2862.	2.8	47
24	Velocity, attenuation, and quality factor in anisotropic viscoelastic media: A perturbation approach. Geophysics, 2008, 73, D63-D73.	2.6	46
25	Parabolic lines and caustics in homogeneous weakly anisotropic solids. Geophysical Journal International, 2003, 152, 318-334.	2.4	45
26	Calculation of the slowness vector from the ray vector in anisotropic media. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 883-896.	2.1	45
27	Real ray tracing in anisotropic viscoelastic media. Geophysical Journal International, 2008, 175, 617-626.	2.4	45
28	Resolution of non-double-couple components in the seismic moment tensor using regional networksâ€”II: application to aftershocks of the 1999 Mw 7.4 Izmit earthquake. Geophysical Journal International, 2014, 196, 1878-1888.	2.4	45
29	Inversion for anisotropy from non-double-couple components of moment tensors. Journal of Geophysical Research, 2004, 109, .	3.3	43
30	Weak-contrast reflection/transmission coefficients in weakly anisotropic elastic media:P-wave incidence. Geophysical Journal International, 1999, 138, 553-562.	2.4	40
31	Can unbiased source be retrieved from anisotropic waveforms by using an isotropic model of the medium?. Tectonophysics, 2002, 356, 125-138.	2.2	38
32	Moment Tensor Inversion Based on the Principal Component Analysis of Waveforms: Method and Application to Microearthquakes in West Bohemia, Czech Republic. Seismological Research Letters, 2017, 88, 1303-1315.	1.9	37
33	Accuracy of the master-event and double-difference locations: synthetic tests and application to seismicity in West Bohemia, Czech Republic. Journal of Seismology, 2013, 17, 841-859.	1.3	36
34	Network sensor calibration for retrieving accurate moment tensors of acoustic emissions. International Journal of Rock Mechanics and Minings Sciences, 2013, 62, 59-67.	5.8	35
35	Seismic moment tensors of acoustic emissions recorded during laboratory rock deformation experiments: sensitivity to attenuation and anisotropy. Geophysical Journal International, 2016, 205, 38-50.	2.4	35
36	Seismological evidence of fault weakening due to erosion by fluids from observations of intraplate earthquake swarms. Journal of Geophysical Research: Solid Earth, 2017, 122, 3701-3718.	3.4	35

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37	Elastodynamic and elastostatic Green tensors for homogeneous weak transversely isotropic media. Geophysical Journal International, 1997, 130, 786-800.	2.4	34
38	Acoustic axes in triclinic anisotropy. Journal of the Acoustical Society of America, 2005, 118, 647-653.	1.1	33
39	Determination of full moment tensors of microseismic events in a very heterogeneous mining environment. Tectonophysics, 2013, 589, 33-43.	2.2	33
40	Approximate retrieval of the point source in anisotropic media: numerical modelling by indirect parametrization of the source. Geophysical Journal International, 2000, 143, 700-708.	2.4	32
41	Title is missing!. Studia Geophysica Et Geodaetica, 2003, 47, 691-701.	0.5	31
42	Crustal anisotropy in the Bohemian Massif, Czech Republic: Observations based on Central European Lithospheric Experiment Based on Refraction (CELEBRATION) 2000. Journal of Geophysical Research, 2003, 108, .	3.3	31
43	Determination of elastic anisotropy of rocks from P- and S-wave velocities: numerical modelling and lab measurements. Geophysical Journal International, 2014, 199, 1682-1697.	2.4	31
44	Moment Tensors of Induced Microearthquakes in The Geysers Geothermal Reservoir From Broadband Seismic Recordings: Implications for Faulting Regime, Stress Tensor, and Fluid Pressure. Journal of Geophysical Research: Solid Earth, 2018, 123, 8748-8766.	3.4	31
45	Approximate Relation Between the Ray Vector and the Wave Normal in Weakly Anisotropic Media. Studia Geophysica Et Geodaetica, 2002, 46, 793-807.	0.5	30
46	Moho depth determination from waveforms of microearthquakes in the West Bohemia/Vogtland swarm area. Journal of Geophysical Research: Solid Earth, 2013, 118, 120-137.	3.4	29
47	Sensitivity of stress inversion of focal mechanisms to pore pressure changes. Geophysical Research Letters, 2016, 43, 8441-8450.	4.0	29
48	On numerically solving the complex eikonal equation using real ray-tracing methods: A comparison with the exact analytical solution. Geophysics, 2012, 77, T109-T116.	2.6	28
49	Nonisotropic radiation of the 2013 North Korean nuclear explosion. Geophysical Research Letters, 2014, 41, 7048-7056.	4.0	28
50	Detection of high-frequency tensile vibrations of a fault during shear rupturing: observations from the 2008 West Bohemia swarm. Geophysical Journal International, 2011, 186, 1404-1414.	2.4	26
51	Spatially dependent seismic anisotropy in the Tonga subduction zone: A possible contributor to the complexity of deep earthquakes. Physics of the Earth and Planetary Interiors, 2006, 155, 63-72.	1.9	25
52	Properties ofSwaves near a kiss singularity: a comparison of exact and ray solutions. Geophysical Journal International, 1999, 138, 581-589.	2.4	24
53	Behavior of rays near singularities in anisotropic media. Physical Review B, 2003, 67, .	3.2	23
54	Generation of triplications in transversely isotropic media. Physical Review B, 2003, 68, .	3.2	22

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55	New constraints on the 3D shear wave velocity structure of the upper mantle underneath Southern Scandinavia revealed from non-linear tomography. Tectonophysics, 2013, 602, 38-54.	2.2	22
56	Velocity structure and the role of fluids in the West Bohemia Seismic Zone. Solid Earth, 2014, 5, 863-872.	2.8	20
57	SH-wave Green tensor for homogeneous transversely isotropic media by higher-order approximations in asymptotic ray theory. Wave Motion, 1996, 23, 83-93.	2.0	19
58	Inversion for the Composite Moment Tensor. Bulletin of the Seismological Society of America, 2015, 105, 3024-3035.	2.3	19
59	Tectonic stress regime in the 2003â€“2004 and 2012â€“2015 earthquake swarms in the Ubaye Valley, French Alps. Pure and Applied Geophysics, 2018, 175, 1997-2008.	1.9	19
60	S-wave splitting from records of local micro-earthquakes in West Bohemia/Vogtland: An indicator of complex crustal anisotropy. Studia Geophysica Et Geodaetica, 2008, 52, 631-650.	0.5	18
61	Earthquake Mechanisms and Stress Field. , 2015, , 1-21.		18
62	Azimuthal variation of Pg velocity in the Moldanubian, Czech Republic: observations based on a multi-azimuthal common-shot experiment. Tectonophysics, 2004, 387, 189-203.	2.2	17
63	Title is missing!. Studia Geophysica Et Geodaetica, 2001, 45, 67-84.	0.5	16
64	Earthquake Mechanisms and Stress Field. , 2015, , 728-746.		16
65	Accurate moment tensor inversion of acoustic emissions and its application to Brazilian splitting test. International Journal of Rock Mechanics and Minings Sciences, 2021, 141, 104707.	5.8	15
66	Seismic Network Calibration for Retrieving Accurate Moment Tensors. Bulletin of the Seismological Society of America, 2012, 102, 2491-2506.	2.3	14
67	Is the seismic moment tensor ambiguous at a material interface?. Geophysical Journal International, 2013, 194, 395-400.	2.4	14
68	Single-well moment tensor inversion of tensile microseismic events. Geophysics, 2016, 81, KS219-KS229.	2.6	14
69	Weak anisotropy-attenuation parameters. Geophysics, 2009, 74, WB203-WB213.	2.6	13
70	Applicability of higher-order ray theory forSwave propagation in inhomogeneous weakly anisotropic elastic media. Journal of Geophysical Research, 1999, 104, 28829-28840.	3.3	12
71	Acoustic axes in weak triclinic anisotropy. Geophysical Journal International, 2005, 163, 629-638.	2.4	12
72	Universe opacity and CMB. Monthly Notices of the Royal Astronomical Society, 2018, 478, 283-301.	4.4	12

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73	Universe opacity and Type Ia supernova dimming. Monthly Notices of the Royal Astronomical Society: Letters, 2019, 489, L63-L68.	3.3	12
74	Mapping Stress and Fluids on Faults by Nonshear Earthquakes. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021287.	3.4	12
75	Effect of pressure on 3D distribution of P-wave velocity and attenuation in antigorite serpentinite. Geophysics, 2017, 82, WA33-WA43.	2.6	11
76	Non-double-couple earthquakes in 2017 swarm in Reykjanes Peninsula, SW Iceland: Sensitive indicator of volcano-tectonic movements at slow-spreading rift. Earth and Planetary Science Letters, 2021, 563, 116875.	4.4	11
77	Polarization properties of near-field waves in homogeneous isotropic and anisotropic media: numerical modelling. Geophysical Journal International, 1992, 110, 180-190.	2.4	10
78	Shallow crustal discontinuities inferred from waveforms of microearthquakes: Method and application to KTB Drill Site and West Bohemia Swarm Area. Journal of Geophysical Research: Solid Earth, 2016, 121, 881-902.	3.4	10
79	Multipolar elastic fields in homogeneous isotropic media by higher-order ray approximations. Geophysical Journal International, 1995, 121, 925-932.	2.4	9
80	Frequencyâ€Dependent Moment Tensors of Induced Microearthquakes. Geophysical Research Letters, 2019, 46, 6406-6414.	4.0	9
81	The failure of testing for cosmic opacity via the distance-duality relation. Monthly Notices of the Royal Astronomical Society, 2020, 497, 378-388.	4.4	9
82	Traveltime Calculations for qP, qSV, and qSH Waves in Twoâ€Dimensional Tilted Transversely Isotropic Media. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018868.	3.4	9
83	Asymptotic Elastodynamic Green Function in the Kiss Singularity in Homogeneous Anisotropic Solids. Studia Geophysica Et Geodaetica, 2002, 46, 249-266.	0.5	8
84	Focal mechanisms produced by shear faulting in weakly transversely isotropic crustal rocks. Geophysics, 2006, 71, D145-D151.	2.6	8
85	Behaviour of rays at interfaces in anisotropic viscoelastic media. Geophysical Journal International, 2010, , .	2.4	8
86	Inversion for weak triclinic anisotropy from acoustic axes. Wave Motion, 2013, 50, 1271-1282.	2.0	8
87	Universe opacity and EBL. Monthly Notices of the Royal Astronomical Society, 2017, 465, 1532-1542.	4.4	8
88	Detection of Stress Anomaly Produced by Interaction of Compressive Fault Steps in the West Bohemia Swarm Region, Czech Republic. Tectonics, 2018, 37, 4212-4225.	2.8	7
89	Title is missing!. Studia Geophysica Et Geodaetica, 2000, 44, 614-619.	0.5	6
90	Determination of parameters of viscoelastic anisotropy from ray velocity and ray attenuation: Theory and numerical modeling. Geophysics, 2015, 80, C59-C71.	2.6	6

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91	Seismic Moment Tensors in Anisotropic Media: A Review. Springer Natural Hazards, 2018, , 29-54.	0.3	6
92	Stress Inversion of Regional Seismicity in the Sea of Marmara Region, Turkey. Pure and Applied Geophysics, 2019, 176, 1269-1291.	1.9	6
93	Nonâ€Doubleâ€Couple Moment Tensors of Earthquakes Calculated Using Empirical Greenâ€™s Functions. Seismological Research Letters, 2020, 91, 390-398.	1.9	6
94	Cosmological Redshift and Cosmic Time Dilation in the FLRW Metric. Frontiers in Physics, 0, 10, .	2.1	6
95	Approximate Conditions for the Off-Axis Triplication in Transversely Isotropic Media. Studia Geophysica Et Geodaetica, 2004, 48, 187-198.	0.5	5
96	Comparison of Ray Methods with the Exact Solution in the 1-D Anisotropic â€œSimplified Twisted Crystalâ€•Model. Studia Geophysica Et Geodaetica, 2004, 48, 675-688.	0.5	5
97	Missing dust signature in the cosmic microwave background. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 470, L44-L48.	3.3	5
98	Reply to comments on â€œcrustal anisotropy from local observations of shear-wave splitting in West Bohemia, Czech Republicâ€•by G. H. R. Bokelmann and J. Kawahara: Can the hudson crack model describe behavior of real cracks?. Bulletin of the Seismological Society of America, 1995, 85, 661-664.	2.3	5
99	Optimum size and density of surface grid arrays for retrieving accurate shearâ€tensile fracturing of microearthquakes. Geophysical Prospecting, 2020, 68, 2347-2360.	1.9	4
100	Acoustic and elastodynamic 3D Greenâ€™s functions for isotropic media with a weak velocity gradient. Wave Motion, 2000, 31, 223-236.	2.0	3
101	Considering lightâ€“matter interactions in the Friedmann equations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	3
102	Elastic near-field wave energy radiated by a spherical cavity. Reviews of Modern Physics, 1994, 66, 241-247.	45.6	2
103	Energy balance of simple elastodynamic sources. Pure and Applied Geophysics, 1994, 143, 563-586.	1.9	2
104	Impact of galactic and intergalactic dust on the stellar EBL. Astrophysics and Space Science, 2016, 361, 1.	1.4	2
105	Imaging the Mudurnu Segment of the North Anatolian Fault Zone From Waveforms of Small Earthquakes. Journal of Geophysical Research: Solid Earth, 2018, 123, 493-512.	3.4	2
106	Moment Tensors: Decomposition and Visualization. , 2015, , 1546-1559.		2
107	Comment to â€œqS-waves in a vicinity of the axis of symmetry of homogeneous transversely isotropic mediaâ€, by M. Popov, G.F. Passos, and M.A. Botelho [Wave Motion 42 (2005) 191â€“201]. Wave Motion, 2006, 44, 128-136.	2.0	1
108	Comment on the Seismic Method Depth-Recursive Tomography on Grid (DRTG) Developed by Miroslav NovotnÃ½ and Recently Published in Three Papers in Surveys in Geophysics. Surveys in Geophysics, 2013, 34, 521-529.	4.6	1

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109	Anisotropic attenuation in rocks: Theory, modelling and lab measurements. Geophysical Journal International, 2016, , ggw476.	2.4	1
110	Single-well moment tensor inversion of tensile microseismic events. , 2017, , .		1
111	Moment tensor catalogue of earthquakes in West Bohemia from 2008 to 2018. Earth System Science Data, 2022, 14, 2179-2194.	9.9	1
112	Considering light-matter interactions in Friedmann equations based on the conformal FLRW metric. Journal of Advanced Research, 2023, 46, 49-59.	9.5	1
113	Bilateral recursive restitution of true ground motion from near-field and far-field seismograms. Studia Geophysica Et Geodaetica, 1989, 33, 133-145.	0.5	0
114	Publisher's correction to â€œCrustal anisotropy in the Bohemian Massif, Czech Republic: Observations based on Central European Lithospheric Experiment Based on Refraction (CELEBRATION) 2000â€• Journal of Geophysical Research, 2006, 111, .	3.3	0
115	Moho depth determination from waveforms of microearthquakes in the West Bohemia/Vogtland swarm area. Journal of Geophysical Research: Solid Earth, 2013, , n/a-n/a.	3.4	0
116	Keynote Speaker: Determination of Source Parameters of Induced Earthquakes. , 2014, , .		0
117	Contact of the Samoan Plume with the Tonga Subduction from Intermediate and Deep-Focus Earthquakes. Surveys in Geophysics, 2021, 42, 1347-1375.	4.6	0