

# Andreas Fichtner

## List of Publications by Year in descending order

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113  
papers

5,500  
citations

71061

41  
h-index

88593

70  
g-index

147  
all docs

147  
docs citations

147  
times ranked

3029  
citing authors

#	ARTICLE	IF	CITATIONS
1	Full seismic waveform tomography for upper-mantle structure in the Australasian region using adjoint methods. <i>Geophysical Journal International</i> , 2009, 179, 1703-1725.	1.0	352
2	The adjoint method in seismology. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 157, 86-104.	0.7	238
3	Theoretical background for continental- and global-scale full-waveform inversion in the time-frequency domain. <i>Geophysical Journal International</i> , 2008, 175, 665-685.	1.0	229
4	Full Seismic Waveform Modelling and Inversion. <i>Advances in Geophysical and Environmental Mechanics and Mathematics</i> , 2011, , .	0.1	221
5	The Icelandâ€“Jan Mayen plume system and its impact on mantle dynamics in the North Atlantic region: Evidence from full-waveform inversion. <i>Earth and Planetary Science Letters</i> , 2013, 367, 39-51.	1.8	216
6	Full waveform tomography for radially anisotropic structure: New insights into present and past states of the Australasian upper mantle. <i>Earth and Planetary Science Letters</i> , 2010, 290, 270-280.	1.8	179
7	Multiscale full waveform inversion. <i>Geophysical Journal International</i> , 2013, 194, 534-556.	1.0	176
8	Resolution analysis in full waveform inversion. <i>Geophysical Journal International</i> , 2011, 187, 1604-1624.	1.0	173
9	Hessian kernels of seismic data functionals based upon adjoint techniques. <i>Geophysical Journal International</i> , 2011, 185, 775-798.	1.0	171
10	Long-term safety and efficacy of rotigotine transdermal patch for moderate-to-severe idiopathic restless legs syndrome: a 5-year open-label extension study. <i>Lancet Neurology</i> , The, 2011, 10, 710-720.	4.9	133
11	The deep structure of the North Anatolian Fault Zone. <i>Earth and Planetary Science Letters</i> , 2013, 373, 109-117.	1.8	133
12	Distributed acoustic sensing of microseismic sources and wave propagation in glaciated terrain. <i>Nature Communications</i> , 2020, 11, 2436.	5.8	127
13	Seismic Tomography and the Assessment of Uncertainty. <i>Advances in Geophysics</i> , 2014, , 1-76.	1.1	111
14	Rotigotine improves restless legs syndrome: A 6â€“month randomized, doubleâ€“blind, placeboâ€“controlled trial in the United States. <i>Movement Disorders</i> , 2010, 25, 1675-1683.	2.2	102
15	Modular and flexible spectral-element waveform modelling in two and three dimensions. <i>Geophysical Journal International</i> , 2019, 216, 1675-1692.	1.0	100
16	Crust and upper mantle of the western Mediterranean â€“ Constraints from full-waveform inversion. <i>Earth and Planetary Science Letters</i> , 2015, 428, 52-62.	1.8	96
17	Australian Seismological Reference Model (AuSREM): mantle component. <i>Geophysical Journal International</i> , 2013, 192, 871-887.	1.0	88
18	Rotigotine transdermal patch in moderate to severe idiopathic restless legs syndrome: A randomized, placebo-controlled polysomnographic study. <i>Sleep Medicine</i> , 2010, 11, 848-856.	0.8	86

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19	Hamiltonian Monte Carlo solution of tomographic inverse problems. <i>Geophysical Journal International</i> , 2019, 216, 1344-1363.	1.0	75
20	Towards full waveform ambient noise inversion. <i>Geophysical Journal International</i> , 2018, 212, 566-590.	1.0	73
21	Generalized interferometry $\hat{\epsilon}^{\epsilon}$ : theory for interstation correlations. <i>Geophysical Journal International</i> , 2017, 208, 603-638.	1.0	71
22	The Collaborative Seismic Earth Model: Generation 1. <i>Geophysical Research Letters</i> , 2018, 45, 4007-4016.	1.5	71
23	Source and processing effects on noise correlations. <i>Geophysical Journal International</i> , 2014, 197, 1527-1531.	1.0	70
24	Resolution analysis by random probing. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 5549-5573.	1.4	70
25	Efficient numerical surface wave propagation through the optimization of discrete crustal models-a technique based on non-linear dispersion curve matching (DCM). <i>Geophysical Journal International</i> , 2008, 173, 519-533.	1.0	69
26	Cross-correlation imaging of ambient noise sources. <i>Geophysical Journal International</i> , 2016, 204, 347-364.	1.0	60
27	Separating intrinsic and apparent anisotropy. <i>Physics of the Earth and Planetary Interiors</i> , 2013, 219, 11-20.	0.7	58
28	Hamiltonian Monte Carlo Inversion of Seismic Sources in Complex Media. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 2984-2999.	1.4	57
29	Bayesian Elastic Full-Waveform Inversion Using Hamiltonian Monte Carlo. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018428.	1.4	57
30	Models and Fréchet kernels for frequency-(in)dependent Q. <i>Geophysical Journal International</i> , 2014, 198, 1878-1889.	1.0	55
31	Full waveform tomography of the upper mantle in the South Atlantic region: Imaging a westward fluxing shallow asthenosphere?. <i>Tectonophysics</i> , 2013, 604, 26-40.	0.9	54
32	Signature of slab fragmentation beneath Anatolia from full-waveform tomography. <i>Earth and Planetary Science Letters</i> , 2016, 450, 10-19.	1.8	54
33	Empirical Investigations of the Instrument Response for Distributed Acoustic Sensing (DAS) across 17 Octaves. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 1-10.	1.1	54
34	The adjoint method in seismology". <i>Physics of the Earth and Planetary Interiors</i> , 2006, 157, 105-123.	0.7	53
35	Centroid moment tensor catalogue using a 3 $\hat{\epsilon}$ D continental scale Earth model: Application to earthquakes in Papua New Guinea and the Solomon Islands. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 5517-5543.	1.4	50
36	Full-Waveform inversion of the Japanese Islands region. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 3722-3741.	1.4	49

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37	Wavefield compression for adjoint methods in full-waveform inversion. <i>Geophysics</i> , 2016, 81, R385-R397.	1.4	48
38	Sensitivity Densities for Rotational Ground-Motion Measurements. <i>Bulletin of the Seismological Society of America</i> , 2009, 99, 1302-1314.	1.1	47
39	Imaging mantle plumes with instantaneous phase measurements of diffracted waves. <i>Geophysical Journal International</i> , 2012, 190, 650-664.	1.0	45
40	Intrinsic versus extrinsic seismic anisotropy: The radial anisotropy in reference Earth models. <i>Geophysical Research Letters</i> , 2013, 40, 4284-4288.	1.5	45
41	Augmentation in the treatment of restless legs syndrome with transdermal rotigotine. <i>Sleep Medicine</i> , 2012, 13, 589-597.	0.8	44
42	Automated Large-scale Full Seismic Waveform Inversion for North America and the North Atlantic. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 5902-5928.	1.4	43
43	Full-waveform inversion on heterogeneous HPC systems. <i>Computers and Geosciences</i> , 2016, 89, 260-268.	2.0	42
44	Large-scale Seismic Inversion Framework. <i>Seismological Research Letters</i> , 2015, 86, 1198-1207.	0.8	39
45	Source-structure trade-offs in ambient noise correlations. <i>Geophysical Journal International</i> , 2015, 202, 678-694.	1.0	39
46	Synthetic inversions for density using seismic and gravity data. <i>Geophysical Journal International</i> , 2017, 209, 1204-1220.	1.0	39
47	Inferring earth structure from combined measurements of rotational and translational ground motions. <i>Geophysics</i> , 2009, 74, WCD41-WCD47.	1.4	37
48	Seismic moment tensor inversion using a 3-D structural model: applications for the Australian region. <i>Geophysical Journal International</i> , 2011, 184, 949-964.	1.0	37
49	Ambient Seismic Source Inversion in a Heterogeneous Earth: Theory and Application to the Earth's Hum. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 9184-9207.	1.4	37
50	3-D crustal velocity structure of western Turkey: Constraints from full-waveform tomography. <i>Physics of the Earth and Planetary Interiors</i> , 2017, 270, 90-112.	0.7	35
51	Exploring the potentials and limitations of the time-reversal imaging of finite seismic sources. <i>Solid Earth</i> , 2011, 2, 95-105.	1.2	34
52	Reducing nonuniqueness in finite source inversion using rotational ground motions. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 4860-4875.	1.4	34
53	Subduction of continental lithosphere in the Banda Sea region: Combining evidence from full waveform tomography and isotope ratios. <i>Earth and Planetary Science Letters</i> , 2010, 297, 405-412.	1.8	33
54	Resolution tests revisited: the power of random numbers. <i>Geophysical Journal International</i> , 2013, 192, 676-680.	1.0	33

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55	Global-Scale Full-Waveform Ambient Noise Inversion. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018644.	1.4	33
56	Accelerated full-waveform inversion using dynamic mini-batches. <i>Geophysical Journal International</i> , 2020, 221, 1427-1438.	1.0	31
57	Insights into the kinematics of a volcanic caldera drop: Probabilistic finite-source inversion of the 1996 Bárðarbunga, Iceland, earthquake. <i>Earth and Planetary Science Letters</i> , 2010, 297, 607-615.	1.8	30
58	Finite-frequency sensitivity kernels for two-station surface wave measurements. <i>Geophysical Journal International</i> , 2013, 194, 1042-1049.	1.0	30
59	Distributed Acoustic Sensing in Volcano-Glacial Environments: Mount Meager, British Columbia. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022358.	1.4	30
60	<i>P</i> - and <i>S</i> -wave delays caused by thermal plumes. <i>Geophysical Journal International</i> , 2016, 206, 1169-1178.	1.0	27
61	Hamiltonian Nullspace Shuttles. <i>Geophysical Research Letters</i> , 2019, 46, 644-651.	1.5	27
62	Seismic waveform tomography of the central and eastern Mediterranean upper mantle. <i>Solid Earth</i> , 2020, 11, 669-690.	1.2	27
63	Foundations for a multiscale collaborative Earth model. <i>Geophysical Journal International</i> , 2015, 204, 39-58.	1.0	25
64	Rotation and strain ambient noise interferometry. <i>Geophysical Journal International</i> , 2019, 216, 1938-1952.	1.0	23
65	Rotation, Strain, and Translation Sensors Performance Tests with Active Seismic Sources. <i>Sensors</i> , 2021, 21, 264.	2.1	23
66	Passive seismic monitoring with nonstationary noise sources. <i>Geophysics</i> , 2017, 82, KS57-KS70.	1.4	22
67	Neogene Epeirogeny of Iberia. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 1138-1163.	1.0	21
68	Full Waveform Inversion Beneath the Central Andes: Insight Into the Dehydration of the Nazca Slab and Delamination of the Back-Arc Lithosphere. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB021984.	1.4	21
69	Probabilistic full waveform inversion based on tectonic regionalization development and application to the Australian upper mantle. <i>Geophysical Journal International</i> , 2013, 193, 437-451.	1.0	20
70	Sensitivity of Seismic Noise Correlation Functions to Global Noise Sources. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 6911-6921.	1.4	20
71	Accelerating numerical wave propagation by wavefield adapted meshes. Part II: full-waveform inversion. <i>Geophysical Journal International</i> , 2020, 221, 1591-1604.	1.0	20
72	Measurements of translation, rotation and strain: new approaches to seismic processing and inversion. <i>Journal of Seismology</i> , 2012, 16, 669-681.	0.6	19

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73	Optimal processing for seismic noise correlations. <i>Geophysical Journal International</i> , 2020, 223, 1548-1564.	1.0	19
74	Optimal observables for multiparameter seismic tomography. <i>Geophysical Journal International</i> , 2014, 198, 1241-1254.	1.0	15
75	Time-domain spectral-element ultrasound waveform tomography using a stochastic quasi-Newton method. , 2018, , .		14
76	Connecting beamforming and kernel-based noise source inversion. <i>Geophysical Journal International</i> , 2020, 224, 1607-1620.	1.0	13
77	Autotuning Hamiltonian Monte Carlo for efficient generalized nullspace exploration. <i>Geophysical Journal International</i> , 2021, 227, 941-968.	1.0	13
78	Discrete wave equation upscaling. <i>Geophysical Journal International</i> , 2017, 209, 353-357.	1.0	12
79	The imprint of crustal density heterogeneities on regional seismic wave propagation. <i>Solid Earth</i> , 2016, 7, 1591-1608.	1.2	12
80	A neural network for noise correlation classification. <i>Geophysical Journal International</i> , 2018, 212, 1468-1474.	1.0	11
81	Optimized Experimental Design in the Context of Seismic Full Waveform Inversion and Seismic Waveform Imaging. <i>Advances in Geophysics</i> , 2017, , 1-45.	1.1	10
82	Insights on Upper Mantle Melting, Rheology, and Anelastic Behavior From Seismic Shear Wave Tomography. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 3892-3916.	1.0	10
83	A unified concept for comparison of seismograms using transfer functions. <i>Geophysical Journal International</i> , 2012, , no-no.	1.0	9
84	Safety and efficacy of rotigotine transdermal patch in patients with restless legs syndrome: a post-hoc analysis of patients taking 1-3 mg/24 h for up to 5 years. <i>Expert Opinion on Pharmacotherapy</i> , 2013, 14, 15-25.	0.9	9
85	Seismic Noise Correlation on Heterogeneous Supercomputers. <i>Seismological Research Letters</i> , 2017, 88, 1141-1145.	0.8	9
86	Investigating the seismic structure and visibility of dynamic plume models with seismic array methods. <i>Geophysical Journal International</i> , 2019, 219, S167-S194.	1.0	9
87	The Kefalonia Transform Fault: A STEP fault in the making. <i>Tectonophysics</i> , 2020, 787, 228471.	0.9	9
88	Rapid finite-frequency microseismic noise source inversion at regional to global scales. <i>Geophysical Journal International</i> , 2021, 227, 169-183.	1.0	9
89	Optimal experimental design for joint reflection-transmission ultrasound breast imaging: From ray- to wave-based methods. <i>Journal of the Acoustical Society of America</i> , 2019, 146, 1252-1264.	0.5	8
90	Evolutionary full-waveform inversion. <i>Geophysical Journal International</i> , 2020, 224, 306-311.	1.0	7

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91	Multifrequency inversion of global ambient seismic sources. <i>Geophysical Journal International</i> , 2021, 225, 1616-1623.	1.0	7
92	Impact of the Juan Fernandez Ridge on the Pampean Flat Subduction Inferred From Full Waveform Inversion. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095509.	1.5	7
93	Introducing noisi: a Python tool for ambient noise cross-correlation modeling and noise source inversion. <i>Solid Earth</i> , 2020, 11, 1597-1615.	1.2	6
94	Data-adaptive global full-waveform inversion. <i>Geophysical Journal International</i> , 2022, 230, 1374-1393.	1.0	6
95	Optimal spherical spline filters for the analysis and comparison of regional-scale tomographic models. <i>Physics of the Earth and Planetary Interiors</i> , 2012, 190-191, 44-50.	0.7	5
96	Optimal experimental design to position transducers in ultrasound breast imaging. , 2017, , .		5
97	Theoretical Foundations of Noise Interferometry. , 2019, , 109-143.		5
98	Overview of Pre- and Post-Processing of Ambient-Noise Correlations. , 2019, , 144-187.		5
99	Geochemical and seismic tomography constraints of two-layer magma chambers beneath the bimodal volcanism: A case study of late Cenozoic volcanic rocks from Ulleung Island and Mt. Changbai (Paektu). <i>Chemical Geology</i> , 2021, 581, 120386.	1.4	5
100	Electrochemical tomography as a nondestructive technique to study localized corrosion of metals. <i>Npj Materials Degradation</i> , 2021, 5, .	2.6	5
101	Applications with Surface Waves Extracted from Ambient Seismic Noise. , 2019, , 218-238.		3
102	Waveform tomography in geophysics and helioseismology. , 2015, , 365-377.		2
103	Discovery of topological metamaterials by symmetry relaxation and smooth topological indicators. <i>Physical Review B</i> , 2020, 102, .	1.1	2
104	Lazy wave propagation. <i>Geophysical Journal International</i> , 2019, 216, 984-990.	1.0	1
105	Absorbing Boundaries. <i>Advances in Geophysical and Environmental Mechanics and Mathematics</i> , 2011, , 89-110.	0.1	1
106	Spectral-Element Methods. <i>Advances in Geophysical and Environmental Mechanics and Mathematics</i> , 2011, , 59-81.	0.1	1
107	Analyzing resolution and model uncertainties for ultrasound computed tomography using Hessian information. , 2022, , .		1
108	Automatic Global Multiscale Seismic Inversion. , 2016, , .		0

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109	Advances in Modelling and Inversion of Seismic Wave Propagation. , 2010, , 293-306.		0
110	Misfit Functionals and Adjoint Sources. Advances in Geophysical and Environmental Mechanics and Mathematics, 2011, , 193-210.	0.1	0
111	Introduction to Iterative Non-linear Minimisation. Advances in Geophysical and Environmental Mechanics and Mathematics, 2011, , 113-140.	0.1	0
112	Full Waveform Tomography on Continental Scales. Advances in Geophysical and Environmental Mechanics and Mathematics, 2011, , 233-265.	0.1	0
113	Fr�chet and Hessian Kernel Gallery. Advances in Geophysical and Environmental Mechanics and Mathematics, 2011, , 211-230.	0.1	0