

# Guust Nolet

## List of Publications by Year in descending order

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115  
papers

7,743  
citations

66315

42  
h-index

53190

85  
g-index

116  
all docs

116  
docs citations

116  
times ranked

3523  
citing authors

#	ARTICLE	IF	CITATIONS
1	Finite-Frequency Tomography Reveals a Variety of Plumes in the Mantle. <i>Science</i> , 2004, 303, 338-343.	6.0	941
2	Fréchet kernels for finite-frequency traveltimes-I. Theory. <i>Geophysical Journal International</i> , 2000, 141, 157-174.	1.0	628
3	Tomographic imaging of subducted lithosphere below northwest Pacific island arcs. <i>Nature</i> , 1991, 353, 37-43.	13.7	519
4	Partitioned waveform inversion and two-dimensional structure under the network of autonomously recording seismographs. <i>Journal of Geophysical Research</i> , 1990, 95, 8499-8512.	3.3	279
5	Two-stage subduction history under North America inferred from multiple-frequency tomography. <i>Nature Geoscience</i> , 2008, 1, 458-462.	5.4	262
6	Upper mantle beneath Southeast Asia from Svelocity tomography. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	261
7	Three-dimensional sensitivity kernels for surface wave observables. <i>Geophysical Journal International</i> , 2004, 158, 142-168.	1.0	255
8	Fréchet kernels for finite-frequency traveltimes-II. Examples. <i>Geophysical Journal International</i> , 2000, 141, 175-203.	1.0	247
9	Solving or resolving inadequate and noisy tomographic systems. <i>Journal of Computational Physics</i> , 1985, 61, 463-482.	1.9	171
10	Finite frequency whole mantle $P$ wave tomography: Improvement of subducted slab images. <i>Geophysical Research Letters</i> , 2013, 40, 5652-5657.	1.5	167
11	Shear-wave velocity variations in the upper mantle beneath central Europe. <i>Geophysical Journal International</i> , 1994, 117, 695-715.	1.0	164
12	Tomographic inversion using $\ell_1$ -norm regularization of wavelet coefficients. <i>Geophysical Journal International</i> , 2007, 170, 359-370.	1.0	148
13	Imaging the mantle beneath Iceland using integrated seismological techniques. <i>Journal of Geophysical Research</i> , 2002, 107, ESE 3-1-ESE 3-16.	3.3	144
14	Wave front healing and the evolution of seismic delay times. <i>Journal of Geophysical Research</i> , 2000, 105, 19043-19054.	3.3	132
15	Low S velocities under the Tornquist-Teisseyre zone: Evidence for water injection into the transition zone by subduction. <i>Journal of Geophysical Research</i> , 1994, 99, 15813.	3.3	131
16	Seismic image of the subducted trailing fragments of the Farallon plate. <i>Nature</i> , 1997, 386, 266-269.	13.7	125
17	Three-dimensional waveform sensitivity kernels. <i>Geophysical Journal International</i> , 1998, 132, 521-534.	1.0	125
18	Wavefront healing: a banana-doughnut perspective. <i>Geophysical Journal International</i> , 2001, 146, 289-312.	1.0	117

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19	Plume-driven plumbing and crustal formation in Iceland. <i>Journal of Geophysical Research</i> , 2002, 107, ESE 4-1.	3.3	116
20	Global upper-mantle structure from finite-frequency surface-wave tomography. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	112
21	Explicit, approximate expressions for the resolution and posterior covariance of massive tomographic systems. <i>Geophysical Journal International</i> , 1999, 138, 36-44.	1.0	92
22	Array analysis of seismic surface waves: Limits and possibilities. <i>Pure and Applied Geophysics</i> , 1976, 114, 775-790.	0.8	88
23	A formalism for nonlinear inversion of seismic surface waves. <i>Geophysical Research Letters</i> , 1986, 13, 26-29.	1.5	87
24	Automated multimode inversion of surface and S-waveforms. <i>Geophysical Journal International</i> , 2005, 162, 951-964.	1.0	84
25	Solving or resolving global tomographic models with spherical wavelets, and the scale and sparsity of seismic heterogeneity. <i>Geophysical Journal International</i> , 2011, 187, 969-988.	1.0	83
26	Finite-frequency effects in global surface-wave tomography. <i>Geophysical Journal International</i> , 2005, 163, 1087-1111.	1.0	82
27	Higher Rayleigh modes in western Europe. <i>Geophysical Research Letters</i> , 1975, 2, 60-62.	1.5	80
28	The thin hot plume beneath Iceland. <i>Geophysical Journal International</i> , 1999, 137, 51-63.	1.0	80
29	Seismic evidence for a tilted mantle plume and north-south mantle flow beneath Iceland. <i>Earth and Planetary Science Letters</i> , 2002, 197, 261-272.	1.8	76
30	Measuring finite-frequency body-wave amplitudes and traveltimes. <i>Geophysical Journal International</i> , 2006, 167, 271-287.	1.0	70
31	Mantle plume tomography. <i>Chemical Geology</i> , 2007, 241, 248-263.	1.4	69
32	A model for the deep structure of the East African rift system from simultaneous inversion of teleseismic data. <i>Tectonophysics</i> , 1982, 84, 151-178.	0.9	64
33	Nullspace shuttles. <i>Geophysical Journal International</i> , 1996, 124, 372-380.	1.0	61
34	Multiple-frequency SH-wave tomography of the western US upper mantle. <i>Geophysical Journal International</i> , 2009, 178, 1384-1402.	1.0	59
35	Waveform Analysis of Scholte Modes In Ocean Sediment Layers. <i>Geophysical Journal International</i> , 1996, 125, 385-396.	1.0	58
36	Synthetic seismograms for a synthetic Earth: long-period P- and S-wave traveltime variations can be explained by temperature alone. <i>Geophysical Journal International</i> , 2012, 188, 1393-1412.	1.0	58

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37	Waveform inversions and the significance of surface-wave mode coupling. <i>Geophysical Journal International</i> , 1996, 124, 258-278.	1.0	56
38	New inferences from higher mode data in western Europe and northern Eurasia. <i>Geophysical Journal International</i> , 1980, 61, 459-478.	1.0	52
39	Variability of P660s phases as a consequence of topography of the 660 km discontinuity. <i>Physics of the Earth and Planetary Interiors</i> , 1994, 86, 147-164.	0.7	51
40	Slab temperature and thickness from seismic tomography: 1. Method and application to Tonga. <i>Journal of Geophysical Research</i> , 1999, 104, 28789-28802.	3.3	51
41	Structure of North American mantle constrained by simultaneous inversion of multiple-frequency SH, SS, and Love waves. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	48
42	On the linearity of cross-correlation delay times in finite-frequency tomography. <i>Geophysical Journal International</i> , 2013, 192, 681-687.	1.0	43
43	Pwave amplitudes in a 3-D earth. <i>Geophysical Journal International</i> , 2003, 155, 1-10.	1.0	42
44	Crustal thickness map of the western United States by partitioned waveform inversion. <i>Journal of Geophysical Research</i> , 1998, 103, 30021-30038.	3.3	40
45	Dynamic ray tracing and traveltimes corrections for global seismic tomography. <i>Journal of Computational Physics</i> , 2007, 226, 672-687.	1.9	39
46	On the potential of recording earthquakes for global seismic tomography by low-cost autonomous instruments in the oceans. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	39
47	Seismic monitoring in the oceans by autonomous floats. <i>Nature Communications</i> , 2015, 6, 8027.	5.8	38
48	Teleseismic Delay Times In A 3-D Earth and A New Look At the S Discrepancy. <i>Geophysical Journal International</i> , 1993, 114, 185-195.	1.0	36
49	Global seismic tomography with sparsity constraints: Comparison with smoothing and damping regularization. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 4887-4899.	1.4	35
50	The influence of upper mantle discontinuities on the toroidal free oscillations of the Earth. <i>Geophysical Journal International</i> , 1979, 56, 283-308.	1.0	33
51	Imaging the Galápagos mantle plume with an unconventional application of floating seismometers. <i>Scientific Reports</i> , 2019, 9, 1326.	1.6	33
52	Linearized Inversion of (Teleseismic) Data. , 1981, , 9-37.		33
53	Slab temperature and thickness from seismic tomography: 2. Izu-Bonin, Japan, and Kuril subduction zones. <i>Journal of Geophysical Research</i> , 1999, 104, 28803-28812.	3.3	30
54	Optimal parametrization of tomographic models. <i>Geophysical Journal International</i> , 2005, 161, 365-372.	1.0	30

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55	Computing traveltime and amplitude sensitivity kernels in finite-frequency tomography. <i>Journal of Computational Physics</i> , 2007, 226, 2271-2288.	1.9	30
56	Solving large linear inverse problems by projection. <i>Geophysical Journal International</i> , 1990, 103, 565-568.	1.0	29
57	Diffraction effects upon finite-frequency travel times: A simple 2-D example. <i>Geophysical Research Letters</i> , 1998, 25, 1983-1986.	1.5	29
58	Multiple scattering of high-frequency seismic waves in the deep Earth: Modeling and numerical examples. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	29
59	Comment on "On sensitivity kernels for "wave-equation"™ transmission tomography"™ by de Hoop and van der Hilst. <i>Geophysical Journal International</i> , 2005, 163, 949-951.	1.0	27
60	The upper mantle beneath the Philippine Sea region from waveform inversions. <i>Geophysical Research Letters</i> , 1997, 24, 1851-1854.	1.5	25
61	Modern mermaids: New floats image the deep Earth. <i>Eos</i> , 2011, 92, 337-338.	0.1	25
62	Simultaneous inversion of seismic data. <i>Geophysical Journal International</i> , 1978, 55, 679-691.	1.0	23
63	Slabs Do Not Go Gently. <i>Science</i> , 2009, 324, 1152-1153.	6.0	22
64	The Crustal Structure From Teleseismic P-Wave Coda-I. Method. <i>Geophysical Journal International</i> , 1993, 112, 15-25.	1.0	21
65	A future for drifting seismic networks. <i>Eos</i> , 2006, 87, 305.	0.1	20
66	Surface wave tomography for azimuthal anisotropy in a strongly reduced parameter space. <i>Geophysical Journal International</i> , 2008, 174, 629-648.	1.0	19
67	Crustal structure of the eastern Mediterranean inferred from Rayleigh wave dispersion. <i>Earth and Planetary Science Letters</i> , 1980, 51, 336-342.	1.8	18
68	Crustal thickness estimation using high frequency Rayleigh waves. <i>Geophysical Research Letters</i> , 1995, 22, 539-542.	1.5	17
69	Automatic discrimination of underwater acoustic signals generated by teleseismic P-waves: A probabilistic approach. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	17
70	Sn velocities in western and eastern North America. <i>Geophysical Research Letters</i> , 1998, 25, 1557-1560.	1.5	16
71	Traveltimes and amplitudes of seismic waves: A re-assessment. <i>Geophysical Monograph Series</i> , 2005, , 37-47.	0.1	13
72	An averaged model for the Adriatic subplate. <i>Pure and Applied Geophysics</i> , 1978, 116, 1284-1298.	0.8	12

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73	The deep structure of Corsica as inferred by a broad band seismological profile. <i>Geophysical Research Letters</i> , 1999, 26, 2661-2664.	1.5	12
74	An intermediate-depth tensional earthquake (MW 5.7) and its aftershocks within the Nazca slab, central Chile: A reactivated outer rise fault?. <i>Earth and Planetary Science Letters</i> , 2012, 327-328, 9-16.	1.8	12
75	Compression approaches for the regularized solutions of linear systems from large-scale inverse problems. <i>GEM - International Journal on Geomathematics</i> , 2015, 6, 251-294.	0.7	12
76	On the use of rayleigh wave group velocities for the analysis of continental margins. <i>Tectonophysics</i> , 1979, 59, 335-346.	0.9	11
77	Delays from Floating Seismometers (MERMAID), Part I: Data Processing. <i>Seismological Research Letters</i> , 2016, 87, 73-80.	0.8	10
78	Multiscale Estimation of Event Arrival Times and Their Uncertainties in Hydroacoustic Records from Autonomous Oceanic Floats. <i>Bulletin of the Seismological Society of America</i> , 2020, 110, 970-997.	1.1	9
79	Cross-borehole tomography with correlation delay times. <i>Geophysics</i> , 2014, 79, R1-R12.	1.4	8
80	Automatic recognition of T and teleseismic P waves by statistical analysis of their spectra: An application to continuous records of moored hydrophones. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6469-6485.	1.4	8
81	Traveltime dispersion in an isotropic elastic mantle: strong lower-mantle signal in differential-frequency residuals. <i>Geophysical Journal International</i> , 2015, 203, 2099-2118.	1.0	7
82	Empirical determination of depth-distance corrections for mband Mw from global seismograph network stations. <i>Geophysical Research Letters</i> , 1998, 25, 1451-1454.	1.5	6
83	Perspectives on array seismology and USArray. <i>Geophysical Monograph Series</i> , 2005, , 1-6.	0.1	6
84	Surface sediment effects on teleseismic P wave amplitude. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	5
85	Solving large tomographic linear systems: size reduction and error estimation. <i>Geophysical Journal International</i> , 2014, 199, 276-285.	1.0	5
86	Hydrophone Calibration at Very Low Frequencies. <i>Bulletin of the Seismological Society of America</i> , 2015, 105, 1797-1802.	1.1	4
87	Floating Seismographs (MERMAIDS). <i>Encyclopedia of Earth Sciences Series</i> , 2020, , 1-6.	0.1	3
88	F. Anthony Dahlen (1942–2007). <i>Nature</i> , 2007, 448, 268-268.	13.7	1
89	MeLa: A Programming Language for a New Multidisciplinary Oceanographic Float. <i>Sensors</i> , 2020, 20, 6081.	2.1	1
90	Global Seismology and the Investigation of Deep Continental Structure. , 1984, , 5-22.		1

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91	Transmission Tomography in Seismology. , 2014, , 1-16.		1
92	Transmission Tomography in Seismology. , 2015, , 1887-1904.		1
93	Imaging with Teleseismic Data. , 1989, , 27-47.		1
94	Reply [to "Comment on "Empirical determination of depth-distance corrections for mband Mw from Global Seismograph Network Stations" by G. Nolet et al.]. Geophysical Research Letters, 1998, 25, 4243-4244.	1.5	0
95	Reply [to "Comment on "Empirical determination of depth-distance corrections for mband MW from Global Seismograph Network Stations" By Guust Nolet, Steve Krueger and Robert M. Clouser]. Geophysical Research Letters, 1998, 25, 4271-4272.	1.5	0
96	Reply [to "Comment on "Diffraction effects upon finite-frequency travel times: A simple 2-D example" by Tong et al.]. Geophysical Research Letters, 1999, 26, 2035-2035.	1.5	0
97	Ray theory for seismic waves. , 0, , 11-39.		0
98	Body wave amplitudes: theory. , 0, , 82-92.		0
99	Travel times: observations. , 0, , 93-115.		0
100	Travel times: interpretation. , 0, , 116-144.		0
101	Body wave amplitudes: observation and interpretation. , 0, , 145-157.		0
102	Surface wave interpretation: ray theory. , 0, , 178-207.		0
103	Surface waves: finite-frequency theory. , 0, , 208-218.		0
104	Common corrections. , 0, , 233-254.		0
105	Resolution and error analysis. , 0, , 277-288.		0
106	Model parametrization. , 0, , 219-232.		0
107	Floating Seismographs (MERMAIDS). Encyclopedia of Earth Sciences Series, 2021, , 395-399.	0.1	0
108	Earth's Structure, Upper Mantle. Encyclopedia of Earth Sciences Series, 2021, , 183-189.	0.1	0

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109	Seismic Tomography. Encyclopedia of Earth Sciences Series, 2021, , 1507-1511.	0.1	0
110	Seismic Tomography. Encyclopedia of Earth Sciences Series, 2011, , 1195-1198.	0.1	0
111	Transmission Tomography in Seismology. , 2013, , 1-16.		0
112	A Seismic Tomography Program for Geological Investigations. , 1991, , 109-126.		0
113	Partitioned Nonlinear Optimization for the Interpretation of Seismograms. The IMA Volumes in Mathematics and Its Applications, 1997, , 385-393.	0.5	0
114	Seismic Tomography. Encyclopedia of Earth Sciences Series, 2019, , 1-5.	0.1	0
115	Earth's Structure, Upper Mantle. Encyclopedia of Earth Sciences Series, 2019, , 1-7.	0.1	0