

# Jean Paul Montagner

## List of Publications by Year in descending order

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138  
papers

6,696  
citations

57758

44  
h-index

69250

77  
g-index

141  
all docs

141  
docs citations

141  
times ranked

3154  
citing authors

#	ARTICLE	IF	CITATIONS
1	Global upper mantle tomography of seismic velocities and anisotropies. Journal of Geophysical Research, 1991, 96, 20337-20351.	3.3	455
2	How to reconcile body-wave and normal-mode reference earth models. Geophysical Journal International, 1996, 125, 229-248.	2.4	409
3	A simple method for inverting the azimuthal anisotropy of surface waves. Journal of Geophysical Research, 1986, 91, 511-520.	3.3	311
4	Heterogeneity and anisotropy of the lithosphere of SE Tibet from surface wave array tomography. Journal of Geophysical Research, 2010, 115, .	3.3	254
5	Global anisotropy in the upper mantle inferred from the regionalization of phase velocities. Journal of Geophysical Research, 1990, 95, 4797-4819.	3.3	202
6	Multimode Rayleigh wave inversion for heterogeneity and azimuthal anisotropy of the Australian upper mantle. Geophysical Journal International, 2002, 151, 738-754.	2.4	172
7	Time-reversal imaging of seismic sources and application to the great Sumatra earthquake. Geophysical Research Letters, 2006, 33, .	4.0	156
8	Global-scale analysis of the mantle Pdsphases. Journal of Geophysical Research, 1999, 104, 20203-20219.	3.3	153
9	Identifying global seismic anisotropy patterns by correlating shear-wave splitting and surface-wave data. Physics of the Earth and Planetary Interiors, 2009, 176, 198-212.	1.9	139
10	Global Surface Wave Tomography Using Seismic Hum. Science, 2009, 326, 112-112.	12.6	138
11	Vectorial tomography-II. Application to the Indian Ocean. Geophysical Journal International, 1988, 94, 309-344.	2.4	133
12	Can seismology tell us anything about convection in the mantle?. Reviews of Geophysics, 1994, 32, 115.	23.0	130
13	Petrological constraints on seismic anisotropy. Physics of the Earth and Planetary Interiors, 1989, 54, 82-105.	1.9	127
14	On the Presence of Liquid in Earth's Inner Core. Science, 2000, 287, 2471-2474.	12.6	125
15	Anisotropic structure of the African upper mantle from Rayleigh and Love wave tomography. Physics of the Earth and Planetary Interiors, 2006, 155, 48-62.	1.9	125
16	Where Can Seismic Anisotropy Be Detected in the Earth's Mantle? In Boundary Layers.... Pure and Applied Geophysics, 1998, 151, 223.	1.9	124
17	Coupling the spectral element method with a modal solution for elastic wave propagation in global earth models. Geophysical Journal International, 2003, 152, 34-67.	2.4	119
18	Upper mantle low anisotropy channels below the Pacific Plate. Earth and Planetary Science Letters, 2002, 202, 263-274.	4.4	98

#	ARTICLE	IF	CITATIONS
19	Oceanic lithosphere-asthenosphere boundary from surface wave dispersion data. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 1079-1093.	3.4	98
20	How to relate body wave and surface wave anisotropy?. <i>Journal of Geophysical Research</i> , 2000, 105, 19015-19027.	3.3	97
21	The three-dimensional seismological model a priori constrained: Confrontation with seismic data. <i>Journal of Geophysical Research</i> , 1996, 101, 8457-8472.	3.3	81
22	Constrained reference mantle model. <i>Physics of the Earth and Planetary Interiors</i> , 1989, 58, 205-227.	1.9	80
23	The unique dynamics of the Pacific Hemisphere mantle and its signature on seismic anisotropy. <i>Earth and Planetary Science Letters</i> , 2003, 208, 219-233.	4.4	78
24	Imaging the lithospheric structure beneath the Indian continent. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 7450-7468.	3.4	78
25	Phase velocity structure from Rayleigh and Love waves in Tibet and its neighboring regions. <i>Journal of Geophysical Research</i> , 1998, 103, 21215-21232.	3.3	77
26	3-dimensional structure of the Indian Ocean inferred from long period surface waves. <i>Geophysical Research Letters</i> , 1986, 13, 315-318.	4.0	70
27	Antarctica II: Upper-mantle structure from velocities and anisotropy. <i>Physics of the Earth and Planetary Interiors</i> , 1994, 84, 33-57.	1.9	67
28	Shear wave splitting in the mantle phases. <i>Geophysical Research Letters</i> , 1996, 23, 2449-2452.	4.0	67
29	Seismic anisotropy beneath Tibet: evidence for eastward extrusion of the Tibetan lithosphere?. <i>Earth and Planetary Science Letters</i> , 1996, 140, 83-96.	4.4	66
30	3-D upper mantle shear velocity and attenuation from fundamental mode free oscillation data. <i>Geophysical Journal International</i> , 1990, 101, 61-80.	2.4	65
31	RegSEM: a versatile code based on the spectral element method to compute seismic wave propagation at the regional scale. <i>Geophysical Journal International</i> , 2012, 188, 1203-1220.	2.4	64
32	Time reversal location of glacial earthquakes. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	63
33	Azores hotspot signature in the upper mantle. <i>Journal of Volcanology and Geothermal Research</i> , 2006, 156, 23-34.	2.1	62
34	Vectorial tomography--I. Theory. <i>Geophysical Journal International</i> , 1988, 94, 295-307.	2.4	61
35	An inverse technique for retrieving higher mode phase velocity and mantle structure. <i>Geophysical Journal International</i> , 1993, 113, 669-683.	2.4	61
36	Prompt gravity signal induced by the 2011 Tohoku-Oki earthquake. <i>Nature Communications</i> , 2016, 7, 13349.	12.8	61

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37	The French Pilot Experiment OFM-SISMOBS: first scientific results on noise level and event detection. <i>Physics of the Earth and Planetary Interiors</i> , 1994, 84, 321-336.	1.9	58
38	Observations and modeling of the elastogravity signals preceding direct seismic waves. <i>Science</i> , 2017, 358, 1164-1168.	12.6	58
39	Age-dependent Large-scale Fabric of the Mantle Lithosphere as Derived from Surface-wave Velocity Anisotropy. <i>Pure and Applied Geophysics</i> , 1998, 151, 257.	1.9	55
40	Upper mantle structure of shear-waves velocities and stratification of anisotropy in the Afar Hotspot region. <i>Tectonophysics</i> , 2008, 462, 164-177.	2.2	51
41	Multidisciplinary Constraints on the Abundance of Diamond and Eclogite in the Cratonic Lithosphere. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 2062-2086.	2.5	49
42	Transient gravity perturbations induced by earthquake rupture. <i>Geophysical Journal International</i> , 2015, 201, 1416-1425.	2.4	47
43	Seismic evidence of flow at the base of the upper mantle. <i>Geophysical Research Letters</i> , 1998, 25, 1995-1998.	4.0	46
44	Time-reversal seismic-source imaging and moment-tensor inversion. <i>Geophysical Journal International</i> , 2008, 175, 686-688.	2.4	46
45	Anisotropy of the African continent inferred from surface waves. <i>Physics of the Earth and Planetary Interiors</i> , 1989, 58, 61-81.	1.9	45
46	Evidence for a stagnant plume in the transition zone?. <i>Geophysical Research Letters</i> , 1997, 24, 1007-1010.	4.0	45
47	Intrinsic versus extrinsic seismic anisotropy: The radial anisotropy in reference Earth models. <i>Geophysical Research Letters</i> , 2013, 40, 4284-4288.	4.0	45
48	Mantle upwellings and convective instabilities revealed by seismic tomography and helium isotope geochemistry beneath eastern Africa. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	44
49	Investigation of upper mantle structure under young regions of the southeast Pacific using long-period Rayleigh waves. <i>Physics of the Earth and Planetary Interiors</i> , 1981, 27, 206-222.	1.9	42
50	Seismic anisotropy of the Pacific Ocean inferred from long-period surface waves dispersion. <i>Physics of the Earth and Planetary Interiors</i> , 1985, 38, 28-50.	1.9	42
51	Surface wave higher-mode phase velocity measurements using a roller-coaster-type algorithm. <i>Geophysical Journal International</i> , 2003, 155, 289-307.	2.4	40
52	MOISE: A pilot experiment towards long term sea-floor geophysical observatories. <i>Earth, Planets and Space</i> , 1998, 50, 927-937.	2.5	39
53	Residual homogenization for seismic forward and inverse problems in layered media. <i>Geophysical Journal International</i> , 2013, 194, 470-487.	2.4	37
54	The spectrum of tomographic earth models. <i>Geophysical Journal International</i> , 1998, 133, 783-788.	2.4	35

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55	Anisotropic Tomography Around La Réunion Island From Rayleigh Waves. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 9132-9148.	3.4	35
56	Time evolution of broadband seismic noise during the French Pilot Experiment OFM/SISMOBS. <i>Geophysical Research Letters</i> , 1996, 23, 2995-2998.	4.0	33
57	Anisotropic tomography of the Atlantic Ocean from Rayleigh surface waves. <i>Physics of the Earth and Planetary Interiors</i> , 1998, 106, 257-273.	1.9	32
58	GEOLOGY: Interactions Between Ridges and Plumes. <i>Science</i> , 2001, 294, 1472-1473.	12.6	31
59	Computation of Large Anisotropic Seismic Heterogeneities (CLASH). <i>Geophysical Journal International</i> , 2006, 165, 447-468.	2.4	30
60	Large-scale flow of Indian Ocean asthenosphere driven by Réunion plume. <i>Nature Geoscience</i> , 2019, 12, 1043-1049.	12.9	29
61	Seismic Anisotropy and Global Geodynamics. <i>Reviews in Mineralogy and Geochemistry</i> , 2002, 51, 353-385.	4.8	28
62	Global correlations of mid-ocean-ridge basalt chemistry with seismic tomographic images. <i>Nature</i> , 1993, 364, 225-228.	27.8	27
63	Degrees 2, 4, 6 inferred from seismic tomography. <i>Geophysical Research Letters</i> , 1993, 20, 631-634.	4.0	27
64	Azimuthal anisotropy at Valhall: The Helmholtz equation approach. <i>Geophysical Research Letters</i> , 2013, 40, 2636-2641.	4.0	27
65	Is there seismic attenuation in the mantle?. <i>Earth and Planetary Science Letters</i> , 2014, 388, 257-264.	4.4	27
66	Tomography of the transition zone from the inversion of higher-mode surface waves. <i>Physics of the Earth and Planetary Interiors</i> , 1994, 86, 99-115.	1.9	26
67	Tilt signals derived from a GEOSCOPE VBB Station on the Piton de la Fournaise Volcano. <i>Geophysical Research Letters</i> , 2000, 27, 605-608.	4.0	26
68	A Bayesian approach to infer radial models of temperature and anisotropy in the transition zone from surface wave dispersion curves. <i>Geophysical Journal International</i> , 2013, 195, 1165-1183.	2.4	24
69	Complex force history of a calving-generated glacial earthquake derived from broadband seismic inversion. <i>Geophysical Research Letters</i> , 2016, 43, 1055-1065.	4.0	24
70	Joint inversion of the first overtone and fundamental mode for deep imaging at the Valhall oil field using ambient noise. <i>Geophysical Journal International</i> , 2018, 214, 122-132.	2.4	24
71	Interpreting Radial Anisotropy in Global and Regional Tomographic Models. , 2015, , 105-144.		24
72	Comparison of Iterative Back-Projection Inversion and Generalized Inversion Without Blocks: Case Studies In Attenuation Tomography. <i>Geophysical Journal International</i> , 1989, 97, 19-29.	2.4	22

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73	The GEOSCOPE Program: Progress and Challenges during the Past 30 Years. <i>Seismological Research Letters</i> , 2010, 81, 427-452.	1.9	22
74	Anisotropic structures of the upper mantle beneath the northern Philippine Sea region from Rayleigh and Love wave tomography. <i>Physics of the Earth and Planetary Interiors</i> , 2010, 183, 33-43.	1.9	22
75	Tomographic study of upper mantle attenuation in the Pacific Ocean. <i>Geophysical Research Letters</i> , 1993, 20, 663-666.	4.0	21
76	Towards multiscalar and multiparameter networks for the next century: The French efforts. <i>Physics of the Earth and Planetary Interiors</i> , 1998, 108, 155-174.	1.9	21
77	Confrontation of mantle seismic anisotropy with two extreme models of strain, in central Asia. <i>Geophysical Research Letters</i> , 1998, 25, 1447-1450.	4.0	21
78	Teleseismic travel time residuals in North America and anelasticity of the asthenosphere. <i>Physics of the Earth and Planetary Interiors</i> , 1999, 116, 93-103.	1.9	21
79	Reliability of mantle tomography models assessed by spectral element simulation. <i>Geophysical Journal International</i> , 2009, 177, 125-144.	2.4	21
80	Evidence for crustal seismic anisotropy at the InSight lander site. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117654.	4.4	21
81	MOISE: A Prototype Multiparameter Ocean-Bottom Station. <i>Bulletin of the Seismological Society of America</i> , 2001, 91, 885-892.	2.3	20
82	Anisotropic stratification beneath Africa from joint inversion of SKS and P receiver functions. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	20
83	Normal mode simulation of prompt elastogravity signals induced by an earthquake rupture. <i>Geophysical Journal International</i> , 2019, 216, 935-947.	2.4	20
84	Variation with age of the deep structure of the Pacific Ocean inferred from very long-period Rayleigh wave dispersion. <i>Geophysical Research Letters</i> , 1983, 10, 273-276.	4.0	19
85	Earthquake Early Warning Using Future Generation Gravity Strainmeters. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 10,889.	3.4	19
86	Anisotropic tomography of the European lithospheric structure from surface wave studies. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 2015-2033.	2.5	18
87	Effect of a plume on long period surface waves computed with normal modes coupling. <i>Physics of the Earth and Planetary Interiors</i> , 2000, 119, 57-74.	1.9	17
88	A new coupled spectral element and modal solution method for global seismology: A first application to the scattering induced by a plume-like anomaly. <i>Geophysical Research Letters</i> , 2002, 29, 32-1-32-4.	4.0	17
89	Radial anisotropy in Valhall: ambient noise-based studies of Scholte and Love waves. <i>Geophysical Journal International</i> , 2017, 208, 1524-1539.	2.4	17
90	SKS splitting in the Western Indian Ocean from land and seafloor seismometers: Plume, plate and ridge signatures. <i>Earth and Planetary Science Letters</i> , 2018, 498, 169-184.	4.4	17

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91	Monitoring Greenland ice sheet buoyancy-driven calving discharge using glacial earthquakes. <i>Annals of Glaciology</i> , 2019, 60, 75-95.	1.4	17
92	Deep Earth Structure – Upper Mantle Structure: Global Isotropic and Anisotropic Elastic Tomography. , 2007, , 559-589.		17
93	Deep Earth Structure – Upper Mantle Structure: Global Isotropic and Anisotropic Elastic Tomography. , 2007, , 559-589.		16
94	Numerical assessment of the effects of topography and crustal thickness on martian seismograms using a coupled modal solution – spectral element method. <i>Icarus</i> , 2008, 196, 78-89.	2.5	16
95	Upper mantle heterogeneities in Africa deduced from Rayleigh wave dispersion. <i>Physics of the Earth and Planetary Interiors</i> , 1983, 32, 218-225.	1.9	15
96	Upper-mantle seismic discontinuities in a subduction zone (Japan) investigated from P to S converted waves. <i>Physics of the Earth and Planetary Interiors</i> , 1998, 108, 61-80.	1.9	13
97	SPICE benchmark for global tomographic methods. <i>Geophysical Journal International</i> , 2008, 175, 598-616.	2.4	13
98	Multi-Mode Waveform Tomography of the Indian Ocean Upper and Mid-Mantle Around the Réunion Hotspot. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021490.	3.4	13
99	Several location methods for underwater shots in the Gulf of Genoa (Western Mediterranean): Structural implications. <i>Tectonophysics</i> , 1986, 128, 357-379.	2.2	12
100	The GEOSCOPE program: its data center. <i>Physics of the Earth and Planetary Interiors</i> , 1999, 113, 25-43.	1.9	12
101	Time-reversal method and cross-correlation techniques by normal mode theory: a three-point problem. <i>Geophysical Journal International</i> , 2012, 191, 637-652.	2.4	12
102	Insights from ScS measurements on deep mantle attenuation. <i>Earth and Planetary Science Letters</i> , 2013, 374, 101-110.	4.4	12
103	Quantifying seismic anisotropy induced by small-scale chemical heterogeneities. <i>Geophysical Journal International</i> , 2017, 211, 1585-1600.	2.4	12
104	Evidence of reactivation of a hydrothermal system from seismic anisotropy changes. <i>Nature Communications</i> , 2019, 10, 5278.	12.8	11
105	The Snake River Plain Experiment revisited. Relationships between a Farallon plate fragment and the transition zone. <i>Geophysical Research Letters</i> , 1999, 26, 2673-2676.	4.0	10
106	Hidden Dykes detected on Ultra Long Period seismic signals at Piton de la Fournaise volcano?. <i>Earth and Planetary Science Letters</i> , 2007, 261, 1-8.	4.4	10
107	Age-dependent Large-scale Fabric of the Mantle Lithosphere as Derived from Surface-wave Velocity Anisotropy. , 1998, , 257-280.		10
108	Phase velocity distribution in the Indian Ocean and Indonesian region inferred from GEOSCOPE records. <i>Geophysical Research Letters</i> , 1987, 14, 343-346.	4.0	9

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109	Seismic experiment paves way for long-term seafloor observatories. <i>Eos</i> , 1998, 79, 301-301.	0.1	9
110	Earth's free oscillations recorded by free-fall OBS ocean-bottom seismometers at the Lesser Antilles subduction zone. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	9
111	Monitoring of seismic anisotropy at the time of the 2008 Iwate-Miyagi (Japan) earthquake. <i>Geophysical Journal International</i> , 2017, 211, 483-497.	2.4	9
112	Normal modes of the Earth. <i>Journal of Physics: Conference Series</i> , 2008, 118, 012004.	0.4	8
113	Influence of seismic anisotropy on the cross correlation tensor: numerical investigations. <i>Geophysical Journal International</i> , 2015, 201, 595-604.	2.4	8
114	Comment on "Shear-wave splitting to test mantle deformation models around Hawaii" by Kristoffer T. Walker, GÃ¼nter H. R. Bokelmann, and Simon L. Klemperer. <i>Geophysical Research Letters</i> , 2003, 30, .	4.0	7
115	Sub-sample time shift and horizontal displacement measurements using phase-correlation method in time-lapse seismic. <i>Geophysical Prospecting</i> , 2017, 65, 407-425.	1.9	7
116	Numerical Modeling of Iceberg Capsizing Responsible for Glacial Earthquakes. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 3013-3033.	2.8	7
117	Surface wave focusing effects: Numerical modeling and statistical observations. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 155, 191-200.	1.9	5
118	Deep Earth Structure - Upper Mantle Structure: Global Isotropic and Anisotropic Elastic Tomography. , 2015, , 613-639.		5
119	Early earthquake detection capabilities of different types of future-generation gravity gradiometers. <i>Geophysical Journal International</i> , 2020, 224, 533-542.	2.4	5
120	Modelling capsizing icebergs in the open ocean. <i>Geophysical Journal International</i> , 2020, 223, 1265-1287.	2.4	5
121	Where Can Seismic Anisotropy Be Detected in the Earth's Mantle? In <i>Boundary Layers</i>   ., 1998, , 223-256.		5
122	Anisotropy of iron in the Earth's inner core. <i>Nature</i> , 1999, 400, 629-629.	27.8	4
123	The MBARI Margin seismology experiment: A prototype seafloor observatory. <i>Developments in Marine Technology</i> , 2002, , 93-110.	0.5	4
124	The mantle transition zone dynamics as revealed through seismic anisotropy. <i>Tectonophysics</i> , 2021, 821, 229133.	2.2	4
125	Correction to "Time evolution of broadband seismic noise during the French Pilot Experiment OFM/SISMOBS" <i>Geophysical Research Letters</i> , 1997, 24, 493-493.	4.0	3
126	Intrinsic versus extrinsic seismic anisotropy: Surface wave phase velocity inversion. <i>Comptes Rendus - Geoscience</i> , 2015, 347, 66-76.	1.2	3



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127	Comment on "Earthquake-induced prompt gravity signals identified in dense array data in Japan" by Kimura et al. Earth, Planets and Space, 2019, 71, .	2.5	3
128	Self-consistent retrieval of source parameters using mantle waves. Bulletin of the Seismological Society of America, 1998, 88, 995-1002.	2.3	3
129	Seismic Anisotropy Tomography. , 2002, , 191-232.		2
130	Geophysical ocean bottom observatories or temporary portable networks?. Developments in Marine Technology, 2002, , 59-81.	0.5	2
131	The GEOSCOPE Program: Progress and Challenges during the Past 30 Years. Seismological Research Letters, 2013, 84, 250-250.	1.9	1
132	Seismology and Environment. Encyclopedia of Earth Sciences Series, 2020, , 1-8.	0.1	1
133	Reply to comment by J. Trampert. Geophysical Journal International, 1990, 103, 757-758.	2.4	0
134	Reply to Battaglia and Cayol, 2009. Earth and Planetary Science Letters, 2009, 287, 288-291.	4.4	0
135	Earthquakes in subduction zones: A multidisciplinary approach. Physics of the Earth and Planetary Interiors, 2009, 175, 1-2.	1.9	0
136	Radial anisotropy in Valhall from ambient noise surface wave tomography of Scholte and Love wave. , 2015, , .		0
137	The Aftershock Sequence of the 2010Mw6.3 Rigan Earthquake in Southeast Iran: Further Evidence of a Hidden Fault in the Southern Lut Block. Bulletin of the Seismological Society of America, 2015, 105, 3114-3120.	2.3	0
138	Seismology and Environment. Encyclopedia of Earth Sciences Series, 2021, , 1655-1661.	0.1	0