

Guilhem Barruol

List of Publications by Year in descending order

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82
papers

4,077
citations

109137

35
h-index

123241

61
g-index

87
all docs

87
docs citations

87
times ranked

2807
citing authors

#	ARTICLE	IF	CITATIONS
1	SplitLab: A shear-wave splitting environment in Matlab. Computers and Geosciences, 2008, 34, 515-528.	2.0	240
2	A quantitative evaluation of the contribution of crustal rocks to the shear-wave splitting of teleseismic SKS waves. Physics of the Earth and Planetary Interiors, 1993, 78, 281-300.	0.7	166
3	Seismic anisotropy and shear-wave splitting in lower-crustal and upper-mantle rocks from the Ivrea Zone—experimental and calculated data. Physics of the Earth and Planetary Interiors, 1996, 95, 175-194.	0.7	165
4	The Seismic anisotropy of the Earth's mantle: From single crystal to polycrystal. Geophysical Monograph Series, 2000, , 237-264.	0.1	164
5	Seismic anisotropy in the eastern United States: Deep structure of a complex continental plate. Journal of Geophysical Research, 1997, 102, 8329-8348.	3.3	159
6	Mid-mantle deformation inferred from seismic anisotropy. Nature, 2002, 415, 777-780.	13.7	152
7	Why do continents break-up parallel to ancient orogenic belts?. Terra Nova, 1997, 9, 62-66.	0.9	146
8	Rheological heterogeneity, mechanical anisotropy and deformation of the continental lithosphere. Tectonophysics, 1998, 296, 61-86.	0.9	141
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.	0.7	139
10	EBSD-measured lattice-preferred orientations and seismic properties of eclogites. Tectonophysics, 2001, 342, 61-80.	0.9	129
11	Upper mantle anisotropy beneath the Geoscope stations. Journal of Geophysical Research, 1999, 104, 10757-10773.	3.3	123
12	Seismic anisotropy reveals the long route of the slab through the western-central Mediterranean mantle. Earth and Planetary Science Letters, 2006, 241, 517-529.	1.8	99
13	Multimode surface waveform tomography of the Pacific Ocean: a closer look at the lithospheric cooling signature. Geophysical Journal International, 2006, 166, 1384-1397.	1.0	90
14	Azimuthal anisotropy of the Pacific region. Earth and Planetary Science Letters, 2006, 250, 53-71.	1.8	80
15	The Kaapvaal craton seismic anisotropy: Petrophysical analyses of upper mantle kimberlite nodules. Geophysical Research Letters, 2001, 28, 2497-2500.	1.5	75
16	Upper mantle deformation and seismic anisotropy in continental rifts. Physics and Chemistry of the Earth, 2000, 25, 111-117.	0.6	71
17	South Pacific mantle plumes imaged by seismic observation on islands and seafloor. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	68
18	3-D seismic velocities calculated from lattice-preferred orientation and reflectivity of a lower crustal section: examples of the Val Sesia section (Ivrea zone, northern Italy). Geophysical Journal International, 1993, 115, 1169-1188.	1.0	63

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19	Crustal and uppermost mantle structure variation beneath La Réunion hotspot track. <i>Geophysical Journal International</i> , 2015, 203, 107-126.	1.0	61
20	Upper-mantle flow beneath French Polynesia from shear wave splitting. <i>Geophysical Journal International</i> , 2007, 170, 1262-1288.	1.0	59
21	Belt-parallel mantle flow beneath a halted continental collision: The Western Alps. <i>Earth and Planetary Science Letters</i> , 2011, 302, 429-438.	1.8	59
22	Shear wave splitting around the northern Atlantic: frozen Pangaeon lithospheric anisotropy?. <i>Tectonophysics</i> , 1997, 279, 135-148.	0.9	56
23	Performance report of the RHUM-RUM ocean bottom seismometer network around La Réunion, western Indian Ocean. <i>Advances in Geosciences</i> , 0, 41, 43-63.	12.0	55
24	Lithospheric anisotropy beneath the Pyrenees from shear wave splitting. <i>Journal of Geophysical Research</i> , 1998, 103, 30039-30053.	3.3	52
25	Upper mantle anisotropy beneath the African IRIS and Geoscope stations. <i>Geophysical Journal International</i> , 2001, 146, 549-561.	1.0	51
26	Upper mantle flow beneath and around the Hangay dome, Central Mongolia. <i>Earth and Planetary Science Letters</i> , 2008, 274, 221-233.	1.8	50
27	Seismic anisotropy beneath southern Iberia from SKS splitting. <i>Earth and Planetary Science Letters</i> , 2008, 273, 237-250.	1.8	48
28	A Tertiary asthenospheric flow beneath the southern French Massif Central indicated by upper mantle seismic anisotropy and related to the west Mediterranean extension. <i>Earth and Planetary Science Letters</i> , 2002, 202, 31-47.	1.8	47
29	Investigating La Réunion Hot Spot From Crust to Core. <i>Eos</i> , 2013, 94, 205-207.	0.1	46
30	Tracking major storms from microseismic and hydroacoustic observations on the seafloor. <i>Geophysical Research Letters</i> , 2014, 41, 8825-8831.	1.5	45
31	Mapping upper mantle anisotropy beneath SE France by SKS splitting indicates Neogene asthenospheric flow induced by Apenninic slab roll-back and deflected by the deep Alpine roots. <i>Tectonophysics</i> , 2004, 394, 125-138.	0.9	43
32	A tree of Indo-African mantle plumes imaged by seismic tomography. <i>Nature Geoscience</i> , 2021, 14, 612-619.	5.4	43
33	An integrated study of microstructural, geochemical, and seismic properties of the lithospheric mantle above the Kerguelen plume (Indian Ocean). <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	42
34	Upper mantle deformation beneath the North American-Pacific plate boundary in California from SKS splitting. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	42
35	Characterizing swells in the southern Pacific from seismic and infrasonic noise analyses. <i>Geophysical Journal International</i> , 2006, 164, 516-542.	1.0	41
36	Shear velocity structure of the crust and upper mantle of Madagascar derived from surface wave tomography. <i>Earth and Planetary Science Letters</i> , 2017, 458, 405-417.	1.8	40

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37	Upper mantle anisotropy beneath Australia and Tahiti from <i>P</i> -wave polarization: Implications for real-time earthquake location. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	36
38	Anisotropic Tomography Around La Réunion Island From Rayleigh Waves. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 9132-9148.	1.4	35
39	Anisotropy beneath the Pyrenees Range from teleseismic shear wave splitting: Results from a test experiment. <i>Geophysical Research Letters</i> , 1995, 22, 493-496.	1.5	34
40	The 2007 eruptions and caldera collapse of the Piton de la Fournaise volcano (La Réunion Island) from tilt analysis at a single very broadband seismic station. <i>Geophysical Research Letters</i> , 2014, 41, 2803-2811.	1.5	34
41	Orienting ocean-bottom seismometers from <i>P</i> -wave and Rayleigh wave polarizations. <i>Geophysical Journal International</i> , 2017, 208, 1277-1289.	1.0	34
42	Probing South Pacific mantle plumes with ocean bottom seismographs. <i>Eos</i> , 2005, 86, 429.	0.1	32
43	Mantle flow beneath La Réunion hotspot track from SKS splitting. <i>Earth and Planetary Science Letters</i> , 2013, 362, 108-121.	1.8	32
44	Shear-wave splitting in the Appalachians and the Pyrenees: importance of the inherited tectonic fabric of the lithosphere. <i>Physics of the Earth and Planetary Interiors</i> , 1996, 95, 127-138.	0.7	31
45	Clock errors in land and ocean bottom seismograms: high-accuracy estimates from multiple-component noise cross-correlations. <i>Geophysical Journal International</i> , 2018, 214, 2014-2034.	1.0	31
46	Shear wave splitting in SE Brazil: an effect of active or fossil upper mantle flow, or both?. <i>Earth and Planetary Science Letters</i> , 2003, 211, 79-95.	1.8	30
47	South Pacific hotspot swells dynamically supported by mantle flows. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	30
48	Large-scale flow of Indian Ocean asthenosphere driven by Réunion plume. <i>Nature Geoscience</i> , 2019, 12, 1043-1049.	5.4	29
49	3D seismic study of a ductile shear zone from laboratory and petrofabric data (Saint Barthélemy) <small>Tj ETQq1 1 0,784314 rgBT /Ove</small>	0.9	28
50	PLUME investigates South Pacific Superswell. <i>Eos</i> , 2002, 83, 511.	0.1	27
51	Very- and ultra-long-period seismic signals prior to and during caldera formation on La Réunion Island. <i>Scientific Reports</i> , 2019, 9, 8068.	1.6	26
52	Sources of secondary microseisms in the Indian Ocean. <i>Geophysical Journal International</i> , 2015, 202, 1180-1189.	1.0	25
53	Testing oceanic subduction and convective removal models for the Gibraltar arc: Seismological constraints from dispersion and anisotropy. <i>Tectonophysics</i> , 2011, 502, 28-37.	0.9	24
54	Crustal structure of southern Madagascar from receiver functions and ambient noise correlation: Implications for crustal evolution. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 1179-1197.	1.4	24

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55	Evidence for ancient lithospheric deformation in the East European Craton based on mantle seismic anisotropy and crustal magnetics. <i>Tectonophysics</i> , 2010, 481, 16-28.	0.9	23
56	P-wave tomography of the mantle beneath the South Pacific Superswell revealed by joint ocean floor and islands broadband seismic experiments. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 172, 268-277.	0.7	21
57	On the vertical extent of the large low shear velocity province beneath the South Pacific Superswell. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	21
58	Tide-induced microseismicity in the Mertz glacier grounding area, East Antarctica. <i>Geophysical Research Letters</i> , 2013, 40, 5412-5416.	1.5	21
59	First Observation of the Earth's Permanent Free Oscillations on Ocean Bottom Seismometers. <i>Geophysical Research Letters</i> , 2017, 44, 10,988.	1.5	21
60	Comment on "SKS splitting beneath continental rifts zones" by Gao et al.. <i>Journal of Geophysical Research</i> , 1999, 104, 10787-10789.	3.3	20
61	Mapping upper mantle flow beneath French Polynesia from broadband ocean bottom seismic observations. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	20
62	Baleen whale distribution and seasonal occurrence revealed by an ocean bottom seismometer network in the Western Indian Ocean. <i>Deep-Sea Research Part II: Topical Studies in Oceanography</i> , 2019, 161, 132-144.	0.6	20
63	Tomography of crust and lithosphere in the western Indian Ocean from noise cross-correlations of land and ocean bottom seismometers. <i>Geophysical Journal International</i> , 2019, 219, 924-944.	1.0	18
64	Nature of the crust beneath the islands of the Mozambique Channel: Constraints from receiver functions. <i>Journal of African Earth Sciences</i> , 2021, 184, 104379.	0.9	18
65	Numerical modelling of the upper-mantle anisotropy beneath a migrating strike-slip plate boundary: the San Andreas Fault system. <i>Geophysical Journal International</i> , 2012, 191, 436-458.	1.0	17
66	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.	1.8	17
67	Impact of Tropical Cyclones on Inhabited Areas of the SWIO Basin at Present and Future Horizons. Part 1: Overview and Observing Component of the Research Project RENOVRISK-CYCLONE. <i>Atmosphere</i> , 2021, 12, 544.	1.0	16
68	Crustal and mantle structure beneath the Terre Adelie Craton, East Antarctica: insights from receiver function and seismic anisotropy measurements. <i>Geophysical Journal International</i> , 2015, 200, 807-821.	1.0	15
69	Analyses of extreme swell events on La Réunion Island from microseismic noise. <i>Geophysical Journal International</i> , 2016, 207, 1767-1782.	1.0	15
70	Thermally induced icequakes detected on blue ice areas of the East Antarctic ice sheet. <i>Annals of Glaciology</i> , 2019, 60, 45-56.	2.8	15
71	Contribution of AMS measurements in understanding the migmatitic terrains of Pointe Géologie, Terre Adélie (East-Antarctica). <i>Tectonophysics</i> , 2013, 603, 123-135.	0.9	13
72	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.	1.4	13

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73	Monitoring austral and cyclonic swells in the "Îles Eparses" (Mozambique channel) from microseismic noise. <i>Acta Oecologica</i> , 2016, 72, 120-128.	0.5	12
74	Passive stochastic matched filter for Antarctic blue whale call detection. <i>Journal of the Acoustical Society of America</i> , 2018, 144, 955-965.	0.5	9
75	ReNovRisk: a multidisciplinary programme to study the cyclonic risks in the South-West Indian Ocean. <i>Natural Hazards</i> , 2021, 107, 1191-1223.	1.6	9
76	Orienting and locating ocean-bottom seismometers from ship noise analysis. <i>Geophysical Journal International</i> , 0, , .	1.0	7
77	Assessing swells in La Réunion Island from terrestrial seismic observations, oceanographic records and offshore wave models. <i>Geophysical Journal International</i> , 2020, 221, 1883-1895.	1.0	6
78	Mantle deformation or processing artefact?. <i>Nature</i> , 2003, 422, 136-136.	13.7	5
79	Impact of Tropical Cyclones on Inhabited Areas of the SWIO Basin at Present and Future Horizons. Part 2: Modeling Component of the Research Program RENOVIRISK-CYCLONE. <i>Atmosphere</i> , 2021, 12, 689.	1.0	5
80	Antarctic Blue Whale calls detection based on an improved version of the stochastic matched filter. , 2017, , .		3
81	Cyclone Signatures in the South-West Indian Ocean from Two Decades of Microseismic Noise. <i>Atmosphere</i> , 2021, 12, 488.	1.0	3
82	Seismic velocity and anisotropy of the uppermost mantle beneath Madagascar from <i>P_n</i> tomography. <i>Geophysical Journal International</i> , 2020, 224, 290-305.	1.0	1