Guilhem Barruol

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81 papers	3,449 citations	33 h-index	57 g-index
87 ext. papers	3,725 ext. citations	4.9 avg, IF	5.15 L-index

#	Paper	IF	Citations
81	SplitLab: A shear-wave splitting environment in Matlab. *Computers and Geosciences*, **2008**, 34, 515-528	4.5	205
80	The Seismic anisotropy of the Earth's mantle: From single crystal to polycrystal. *Geophysical Monograph Series*, **2000**, 237-264	1.1	145
79	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	2.3	145
78	Seismic anisotropy in the eastern United States: Deep structure of a complex continental plate. *Journal of Geophysical Research*, **1997**, 102, 8329-8348		144
77	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	2.3	144
76	Mid-mantle deformation inferred from seismic anisotropy. *Nature*, **2002**, 415, 777-80	50.4	135
75	Why do continents break-up parallel to ancient orogenic belts?. *Terra Nova*, **1997**, 9, 62-66	3	130
74	Rheological heterogeneity, mechanical anisotropy and deformation of the continental lithosphere. *Tectonophysics*, **1998**, 296, 61-86	3.1	126
73	Upper mantle anisotropy beneath the Geoscope stations. *Journal of Geophysical Research*, **1999**, 104, 10757-10773		117
72	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	2.3	114
71	EBSD-measured lattice-preferred orientations and seismic properties of eclogites. *Tectonophysics*, **2001**, 342, 61-80	3.1	110
70	Seismic anisotropy reveals the long route of the slab through the western-central Mediterranean mantle. *Earth and Planetary Science Letters*, **2006**, 241, 517-529	5.3	85
69	Multimode surface waveform tomography of the Pacific Ocean: a closer look at the lithospheric cooling signature. *Geophysical Journal International*, **2006**, 166, 1384-1397	2.6	80
68	Azimuthal anisotropy of the Pacific region. *Earth and Planetary Science Letters*, **2006**, 250, 53-71	5.3	75
67	Upper mantle deformation and seismic anisotropy in continental rifts. *Physics and Chemistry of the Earth*, **2000**, 25, 111-117		64
66	The Kaapvaal craton seismic anisotropy: Petrophysical analyses of upper mantle kimberlite nodules. *Geophysical Research Letters*, **2001**, 28, 2497-2500	4.9	62
65	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	2.6	59

64	Upper-mantle flow beneath French Polynesia from shear wave splitting. *Geophysical Journal International*, **2007**, 170, 1262-1288	2.6	55
63	South Pacific mantle plumes imaged by seismic observation on islands and seafloor. *Geochemistry, Geophysics, Geosystems*, **2009**, 10, n/a-n/a	3.6	53
62	Shear wave splitting around the northern Atlantic: frozen Pangaean lithospheric anisotropy?. *Tectonophysics*, **1997**, 279, 135-148	3.1	51
61	Crustal and uppermost mantle structure variation beneath La Réunion hotspot track. *Geophysical Journal International*, **2015**, 203, 107-126	2.6	50
60	Upper mantle anisotropy beneath the African IRIS and Geoscope´stations. *Geophysical Journal International*, **2001**, 146, 549-561	2.6	50
59	Belt-parallel mantle flow beneath a halted continental collision: The Western Alps. *Earth and Planetary Science Letters*, **2011**, 302, 429-438	5.3	49
58	Lithospheric anisotropy beneath the Pyrenees from shear wave splitting. *Journal of Geophysical Research*, **1998**, 103, 30039-30053		49
57	Seismic anisotropy beneath southern Iberia from SKS splitting. *Earth and Planetary Science Letters*, **2008**, 273, 237-250	5.3	46
56	A Tertiary asthenospheric flow beneath the southern French Massif Central indicated by upper mantle seismic anisotropy and related to the west Mediterranean extension. *Earth and Planetary Science Letters*, **2002**, 202, 31-47	5.3	44
55	Performance report of the RHUM-RUM ocean bottom seismometer network around La Réunion, western Indian Ocean. *Advances in Geosciences*,41, 43-63		44
54	Upper mantle flow beneath and around the Hangay dome, Central Mongolia. *Earth and Planetary Science Letters*, **2008**, 274, 221-233	5.3	42
53	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. *Tectonophysics*, **2004**, 394, 125-138	3.1	41
52	Investigating La Réunion Hot Spot From Crust to Core. *Eos*, **2013**, 94, 205-207	1.5	40
51	Tracking major storms from microseismic and hydroacoustic observations on the seafloor. *Geophysical Research Letters*, **2014**, 41, 8825-8831	4.9	36
50	An integrated study of microstructural, geochemical, and seismic properties of the lithospheric mantle above the Kerguelen plume (Indian Ocean). *Geochemistry, Geophysics, Geosystems*, **2008**, 9, n/a-n/a	2.6	36
49	Characterizing swells in the southern Pacific from seismic and infrasonic noise analyses. *Geophysical Journal International*, **2006**, 164, 516-542	2.6	36
48	Shear velocity structure of the crust and upper mantle of Madagascar derived from surface wave tomography. *Earth and Planetary Science Letters*, **2017**, 458, 405-417	5.3	33
47	Upper mantle deformation beneath the North American–Pacific plate boundary in California from SKS splitting. *Journal of Geophysical Research*, **2010**, 115,		33

46	Anisotropy beneath the Pyrenees Range from teleseismic shear wave splitting: Results from a test experiment. *Geophysical Research Letters*, **1995**, 22, 493-496	4.9	32
45	Shear-wave splitting in the Appalachians and the Pyrenees: importance of the inherited tectonic fabric of the lithosphere. *Physics of the Earth and Planetary Interiors*, **1996**, 95, 127-138	2.3	30
44	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. *Geophysical Research Letters*, **2014**, 41, 2803-2811	4.9	29
43	Probing South Pacific mantle plumes with ocean bottom seismographs. *Eos*, **2005**, 86, 429	1.5	29
42	Shear wave splitting in SE Brazil: an effect of active or fossil upper mantle flow, or both?. *Earth and Planetary Science Letters*, **2003**, 211, 79-95	5.3	29
41	Mantle flow beneath La Réunion hotspot track from SKS splitting. *Earth and Planetary Science Letters*, **2013**, 362, 108-121	5.3	28
40	Anisotropic Tomography Around La Réunion Island From Rayleigh Waves. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 9132-9148	3.6	28
39	South Pacific hotspot swells dynamically supported by mantle flows. *Geophysical Research Letters*, **2010**, 37,	4.9	26
38	Upper mantle anisotropy beneath Australia and Tahiti from P wave polarization: Implications for real-time earthquake location. *Journal of Geophysical Research*, **2009**, 114,		26
37	3D seismic study of a ductile shear zone from laboratory and petrofabric data (Saint Barthélemy Massif, Northern Pyrenees, France). *Terra Nova*, **1992**, 4, 63-76	3	25
36	PLUME investigates South Pacific Superswell. *Eos*, **2002**, 83, 511	1.5	24
35	Orienting ocean-bottom seismometers fromP-wave and Rayleigh wave polarizations. *Geophysical Journal International*, **2017**, 208, 1277-1289	2.6	22
34	Testing oceanic subduction and convective removal models for the Gibraltar arc: Seismological constraints from dispersion and anisotropy. *Tectonophysics*, **2011**, 502, 28-37	3.1	22
33	P-wave tomography of the mantle beneath the South Pacific Superswell revealed by joint ocean floor and islands broadband seismic experiments. *Physics of the Earth and Planetary Interiors*, **2009**, 172, 268-277	2.3	21
32	Crustal structure of southern Madagascar from receiver functions and ambient noise correlation: Implications for crustal evolution. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 1179-1197	3.6	20
31	Sources of secondary microseisms in the Indian Ocean. *Geophysical Journal International*, **2015**, 202, 1180-1189	2.6	20
30	Evidence for ancient lithospheric deformation in the East European Craton based on mantle seismic anisotropy and crustal magnetics. *Tectonophysics*, **2010**, 481, 16-28	3.1	20
29	Clock errors in land and ocean bottom seismograms: high-accuracy estimates from multiple-component noise cross-correlations. *Geophysical Journal International*, **2018**, 214, 2014-2034	2.6	19

28	On the vertical extent of the large low shear velocity province beneath the South Pacific Superswell. *Geophysical Research Letters*, **2009**, 36, n/a-n/a	4.9	19
27	Comment on "SKS splitting beneath continental rifts" by Gao et al.. *Journal of Geophysical Research*, **1999**, 104, 10787-10789		19
26	Mapping upper mantle flow beneath French Polynesia from broadband ocean bottom seismic observations. *Geophysical Research Letters*, **2009**, 36,	4.9	18
25	Tide-induced microseismicity in the Mertz glacier grounding area, East Antarctica. *Geophysical Research Letters*, **2013**, 40, 5412-5416	4.9	17
24	Very- and ultra-long-period seismic signals prior to and during caldera formation on La Réunion Island. *Scientific Reports*, **2019**, 9, 8068	4.9	14
23	Numerical modelling of the upper-mantle anisotropy beneath a migrating strike-slip plate boundary: the San Andreas Fault system. *Geophysical Journal International*, **2012**, 191, 436-458	2.6	14
22	Contribution of AMS measurements in understanding the migmatitic terrains of Pointe Géologie, Terre Adélie (East-Antarctica). *Tectonophysics*, **2013**, 603, 123-135	3.1	13
21	First Observation of the Earth's Permanent Free Oscillations on Ocean Bottom Seismometers. *Geophysical Research Letters*, **2017**, 44, 10,988	4.9	12
20	SKS splitting in the Western Indian Ocean from land and seafloor seismometers: Plume, plate and ridge signatures. *Earth and Planetary Science Letters*, **2018**, 498, 169-184	5.3	12
19	Large-scale flow of Indian Ocean asthenosphere driven by Réunion plume. *Nature Geoscience*, **2019**, 12, 1043-1049	18.3	12
18	Crustal and mantle structure beneath the Terre Adelie Craton, East Antarctica: insights from receiver function and seismic anisotropy measurements. *Geophysical Journal International*, **2015**, 200, 807-821	2.6	12
17	Baleen whale distribution and seasonal occurrence revealed by an ocean bottom seismometer network in the Western Indian Ocean. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **2019**, 161, 132-144	2.3	12
16	Analyses of extreme swell events on La Réunion Island from microseismic noise. *Geophysical Journal International*, **2016**, 207, 1767-1782	2.6	11
15	Thermally induced icequakes detected on blue ice areas of the East Antarctic ice sheet. *Annals of Glaciology*, **2019**, 60, 45-56	2.5	11
14	Monitoring austral and cyclonic swells in the "Iles Eparses" (Mozambique channel) from microseismic noise. *Acta Oecologica*, **2016**, 72, 120-128	1.7	10
13	Tomography of crust and lithosphere in the western Indian Ocean from noise cross-correlations of land and ocean bottom seismometers. *Geophysical Journal International*, **2019**, 219, 924-944	2.6	9
12	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. *Atmosphere*, **2021**, 12, 544	2.7	9
11	A tree of Indo-African mantle plumes imaged by seismic tomography. *Nature Geoscience*, **2021**, 14, 612-618	18.3	8

10	Passive stochastic matched filter for Antarctic blue whale call detection. *Journal of the Acoustical Society of America*, **2018**, 144, 955	2.2	6
9	Assessing swells in La Réunion Island from terrestrial seismic observations, oceanographic records and offshore wave models. *Geophysical Journal International*, **2020**, 221, 1883-1895	2.6	5
8	Mantle deformation or processing artefact?. *Nature*, **2003**, 422, 136-136	50.4	5
7	ReNovRisk: a multidisciplinary programme to study the cyclonic risks in the South-West Indian Ocean. *Natural Hazards*, **2021**, 107, 1191-1223	3	5
6	Impact of Tropical Cyclones on Inhabited Areas of the SWIO Basin at Present and Future Horizons. Part 2: Modeling Component of the Research Program RENOVRISK-CYCLONE. *Atmosphere*, **2021**, 12, 689	2.7	4
5	Multi-Mode Waveform Tomography of the Indian Ocean Upper and Mid-Mantle Around the Réunion Hotspot. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2020JB021490	3.6	4
4	Nature of the crust beneath the islands of the Mozambique Channel: Constraints from receiver functions. *Journal of African Earth Sciences*, **2021**, 184, 104379	2.2	3
3	Antarctic Blue Whale calls detection based on an improved version of the stochastic matched filter **2017**,		2
2	Cyclone Signatures in the South-West Indian Ocean from Two Decades of Microseismic Noise. *Atmosphere*, **2021**, 12, 488	2.7	2
1	Seismic velocity and anisotropy of the uppermost mantle beneath Madagascar from Pn tomography. *Geophysical Journal International*, **2020**, 224, 290-305	2.6	1