Paul Wessel

List of Publications by Year
in descending order

83 papers	20,942 citations	101496 36 h-index	71651 76 g-index
90 all docs	90 docs citations	90 times ranked	12422 citing authors

#	Article	IF	Citations
1	Improved Bathymetric Prediction Using Geological Information: SYNBATH. Earth and Space Science, 2022, 9, .	1.1	19
2	Analysis of Pacific Hotspot Chains. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	0
3	Rheology and thermal structure of the lithosphere beneath the Hawaiian Ridge inferred from gravity data and models of plate flexure. Geophysical Journal International, 2020, 222, 207-224.	1.0	11
4	PÅ«hÄhonu: Earth's biggest and hottest shield volcano. Earth and Planetary Science Letters, 2020, 542, 116296.	1.8	9
5	Global Bathymetry and Topography at 15ÂArcÂSec: SRTM15+. Earth and Space Science, 2019, 6, 1847-1864.	1.1	440
6	The Seagoing Scientist's Toolbox: Integrated Methods for Quality Control of Marine Geophysical Data at Sea. Geochemistry, Geophysics, Geosystems, 2019, 20, 5415-5424.	1.0	2
7	The Generic Mapping Tools Version 6. Geochemistry, Geophysics, Geosystems, 2019, 20, 5556-5564.	1.0	1,246
8	Tectonic Reconstruction of the Ellice Basin. Tectonics, 2019, 38, 3854-3865.	1.3	5
9	Producing marine geophysical archive files from raw underway data. Computers and Geosciences, 2019, 133, 104321.	2.0	2
10	Assessing Models for Pacific Absolute Plate and Plume Motions. Geochemistry, Geophysics, Geosystems, 2019, 20, 6016-6032.	1.0	4
11	Mid-Cenozoic Pacific plate motion change: Implications for the Northwest Hawaiian Ridge and circum-Pacific. Geology, 2018, 46, 939-942.	2.0	26
12	Anti-aliasing filters for deriving high-accuracy DEMs from TLS data: A case study from Freeport, Texas. Computers and Geosciences, 2017, 100, 125-134.	2.0	15
13	The GMT/MATLAB Toolbox. Geochemistry, Geophysics, Geosystems, 2017, 18, 811-823.	1.0	61
14	Constraints on volumes and patterns of asthenospheric melt from the space€time distribution of seamounts. Geophysical Research Letters, 2017, 44, 7203-7210.	1.5	8
15	ASSESSING PACIFIC ABSOLUTE PLATE AND PLUME MOTIONS. , 2017, , .		1
16	New analytic solutions for modeling vertical gravity gradient anomalies. Geochemistry, Geophysics, Geosystems, 2016, 17, 1915-1924.	1.0	10
17	Interpolation of 2â€D vector data using constraints from elasticity. Geophysical Research Letters, 2016, 43, 10,703.	1.5	40
18	Ridgeâ€spotting: A new test for Pacific absolute plate motion models. Geochemistry, Geophysics, Geosystems, 2016, 17, 2408-2420.	1.0	10

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19	Regional–residual separation of bathymetry and revised estimates of Hawaii plume flux. Geophysical Journal International, 2016, 204, 932-947.	1.0	36
20	Semiautomatic fracture zone tracking. Geochemistry, Geophysics, Geosystems, 2015, 16, 2462-2472.	1.0	60
21	Long-term interaction between mid-ocean ridges and mantle plumes. Nature Geoscience, 2015, 8, 479-483.	5.4	92
22	Plate Tectonics. , 2015, , 45-93.		12
23	Absolute plate motion of Africa around Hawaii-Emperor bend time. Geophysical Journal International, 2015, 201, 1743-1764.	1.0	20
24	Community infrastructure and repository for marine magnetic identifications. Geochemistry, Geophysics, Geosystems, 2014, 15, 1629-1641.	1.0	97
25	Constraining explosive volcanism: subjective choices during estimates of eruption magnitude. Bulletin of Volcanology, 2014, 76, 1.	1.1	38
26	From field data to volumes: constraining uncertainties in pyroclastic eruption parameters. Bulletin of Volcanology, 2014, 76, 1.	1.1	38
27	Toward 1-mGal accuracy in global marine gravity from CryoSat-2, Envisat, and Jason-1. The Leading Edge, 2013, 32, 892-899.	0.4	208
28	Analysis of Ontong Java Plateau palaeolatitudes: evidence for large-scale rotation since 123 Ma?. Geophysical Journal International, 2013, 194, 18-29.	1.0	8
29	Generic Mapping Tools: Improved Version Released. Eos, 2013, 94, 409-410.	0.1	3,003
30	Chronology and Geochemistry of Lavas from the Nazca Ridge and Easter Seamount Chain: an Â30 Myr Hotspot Record. Journal of Petrology, 2012, 53, 1417-1448.	1.1	39
31	Reconstructing Ontong Java Nui: Implications for Pacific absolute plate motion, hotspot drift and true polar wander. Earth and Planetary Science Letters, 2012, 331-332, 140-151.	1.8	87
32	Errata–based correction of marine geophysical trackline data. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	5
33	Open radar interferometry software for mapping surface Deformation. Eos, 2011, 92, 234-234.	0.1	269
34	The tectonic fabric of the ocean basins. Journal of Geophysical Research, 2011, 116, .	3.3	123
35	New global seamount census from altimetry-derived gravity data. Geophysical Journal International, 2011, 186, 615-631.	1.0	101
36	Patterns of intraplate volcanism controlled by asthenospheric shear. Nature Geoscience, 2011, 4, 317-321.	5.4	125

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37	The spatial and temporal distribution of marine geophysical surveys. Acta Geophysica, 2011, 59, 55-71.	1.0	23
38	Plate Tectonics. Encyclopedia of Earth Sciences Series, 2011, , 801-812.	0.1	0
39	Tools for analyzing intersecting tracks: The x2sys package. Computers and Geosciences, 2010, 36, 348-354.	2.0	28
40	The Global Seamount Census. Oceanography, 2010, 23, 24-33.	0.5	262
41	Heterogeneous nucleation and epitaxial crystal growth of magmatic minerals. Geology, 2010, 38, 367-370.	2.0	52
42	Seamount Discovery Tool Aids Navigation to Uncharted Seafloor Features. Oceanography, 2010, 23, 34-36.	0.5	59
43	Exploring the Ends of the Earth. Oceanography, 2010, 23, 176-179.	0.5	1
44	A general-purpose Green's function-based interpolator. Computers and Geosciences, 2009, 35, 1247-1254.	2.0	36
45	Analysis of Observed and Predicted Tsunami Travel Times for the Pacific and Indian Oceans. Pure and Applied Geophysics, 2009, 166, 301-324.	0.8	27
46	Observations of geometry and ages constrain relative motion of Hawaii and Louisville plumes. Earth and Planetary Science Letters, 2009, 284, 467-472.	1.8	42
47	Seminar 2.0: Learning With Skype and Video Podcasts. Eos, 2009, 90, 145-147.	0.1	1
48	How supercontinents and superoceans affect seafloor roughness. Nature, 2008, 456, 938-941.	13.7	28
49	Interpolation using a generalized Green's function for a spherical surface spline in tension. Geophysical Journal International, 2008, 174, 21-28.	1.0	24
50	Directional median filtering for regional–residual separation of bathymetry. Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	23
51	Pacific absolute plate motion since 145 Ma: An assessment of the fixed hot spot hypothesis. Journal of Geophysical Research, 2008, 113, .	3.3	157
52	Hotspotting: Principles and properties of a plate tectonic Hough transform. Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	4
53	Improving the quality of marine geophysical track line data: Along–track analysis. Journal of Geophysical Research, 2008, 113, .	3.3	19
54	Plate Tectonics. , 2007, , 49-98.		7

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55	Bathymetry of the Pacific plate and its implications for thermal evolution of lithosphere and mantle dynamics. Journal of Geophysical Research, 2007, 112, .	3.3	32
56	Reconciling late Neogene Pacific absolute and relative plate motion changes. Geochemistry, Geophysics, Geosystems, 2007, 8, .	1.0	31
57	The mgd77 supplement to the generic mapping tools. Computers and Geosciences, 2007, 33, 62-75.	2.0	11
58	Toward a self-consistent, high-resolution absolute plate motion model for the Pacific. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	1.0	76
59	Global gravity, bathymetry, and the distribution of submarine volcanism through space and time. Journal of Geophysical Research, 2006, 111, .	3.3	78
60	Motion of the Ontong Java Plateau in the hot-spot frame of reference: 122 Ma-present. Geological Society Special Publication, 2004, 229, 9-20.	0.8	21
61	Compression of large data grids for Internet transmission. Computers and Geosciences, 2003, 29, 665-671.	2.0	11
62	Global distribution of seamounts inferred from gridded Geosat/ERS-1 altimetry. Journal of Geophysical Research, 2001, 106, 19431-19441.	3.3	136
63	Comments on â€œseismic properties of the Eltanin transform system, south Pacificâ€•by Emile A. Okal and Amy R. Langenhorst. Physics of the Earth and Planetary Interiors, 2001, 123, 77-79.	0.7	2
64	Isostatic Consequences of Giant Landslides on the Hawaiian Ridge. Pure and Applied Geophysics, 2000, 157, 1097-1114.	0.8	39
65	Ontong Java Plateau and late Neogene changes in Pacific plate motion. Journal of Geophysical Research, 2000, 105, 28255-28277.	3.3	66
66	New hotspotting software available. Eos, 1999, 80, 319.	0.1	2
67	Interpolation with Splines in Tension: A Green's Function Approach. Mathematical Geosciences, 1998, 30, 77-93.	0.9	113
68	An Empirical Method for Optimal Robust Regional-Residual Separation of Geophysical Data. Mathematical Geosciences, 1998, 30, 391-408.	0.9	50
69	Hotspotting called into question. Nature, 1998, 396, 127-128.	13.7	14
70	The geometric relationship between hot spots and seamounts: implications for Pacific hot spots. Earth and Planetary Science Letters, 1998, 158, 1-18.	1.8	39
71	Factors influencing the locations of hot spots determined by the hot-spotting technique. Geophysical Research Letters, 1998, 25, 555-558.	1.5	5
72	New, improved version of generic mapping tools released. Eos, 1998, 79, 579-579.	0.1	6,259

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73	An Empirical Method for Optimal Robust Regional-Residual Separation of Geophysical Data. , 1998, 30, 391.		1
74	Distribution of large Pacific seamounts from Geosat/ERS-1: Implications for the history of intraplate volcanism. Journal of Geophysical Research, 1997, 102, 22459-22475.	3.3	70
75	Sizes and Ages of Seamounts Using Remote Sensing: Implications for Intraplate Volcanism. Science, 1997, 277, 802-805.	6.0	58
76	A geometric technique for relocating hotspots and refining absolute plate motions. Nature, 1997, 387, 365-369.	13.7	149
77	Flexure across a continent-ocean fracture zone: the northern Falkland/Malvinas Plateau, South Atlantic. Geo-Marine Letters, 1997, 17, 110-118.	0.5	38
78	New version of the generic mapping tools. Eos, 1995, 76, 329-329.	0.1	2,031
79	Free software helps map and display data. Eos, 1991, 72, 441-441.	0.1	3,255
80	Gridding with continuous curvature splines in tension. Geophysics, 1990, 55, 293-305.	1.4	1,200
81	XOVER: A cross-over error detector for track data. Computers and Geosciences, 1989, 15, 333-346.	2.0	46
82	The Oslo Graben gravity high and taphrogenesis. Tectonophysics, 1987, 142, 15-26.	0.9	34
83	Flexure modelling at seamounts with dense cores. Geophysical Journal International, 0, 182, 583-598.	1.0	10