

William S D Wilcock

List of Publications by Year in descending order

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97
papers

3,744
citations

134610

34
h-index

169272

56
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110
all docs

110
docs citations

110
times ranked

2590
citing authors

#	ARTICLE	IF	CITATIONS
1	Geodetic Monitoring at Axial Seamount Since Its 2015 Eruption Reveals a Waning Magma Supply and Tightly Linked Rates of Deformation and Seismicity. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	1.0	11
2	A Thirty-Month Seafloor Test of the A-0-A Method for Calibrating Pressure Gauges. <i>Frontiers in Earth Science</i> , 2021, 8, .	0.8	12
3	Illuminating tremors in the deep. <i>Science</i> , 2021, 371, 882-884.	6.0	2
4	Persistent Mobile Ocean Observing: Marine Vehicle Highways. <i>Marine Technology Society Journal</i> , 2021, 55, 86-87.	0.3	0
5	A method for tracking blue whales (<i>Balaenoptera musculus</i>) with a widely spaced network of ocean bottom seismometers. <i>PLoS ONE</i> , 2021, 16, e0260273.	1.1	4
6	Physical Sources of High-Frequency Seismic Noise on Cascadia Initiative Ocean Bottom Seismometers. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009085.	1.0	20
7	New Opportunities to Study Earthquake Precursors. <i>Seismological Research Letters</i> , 2020, 91, 2444-2447.	0.8	27
8	Precision Seismic Monitoring and Analysis at Axial Seamount Using a Real-Time Double-Difference System. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018796.	1.4	11
9	Axial Seamount: Periodic tidal loading reveals stress dependence of the earthquake size distribution (b value). <i>Earth and Planetary Science Letters</i> , 2019, 512, 39-45.	1.8	23
10	A Joint Inversion for Three-Dimensional P and S Wave Velocity Structure and Earthquake Locations Beneath Axial Seamount. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 12997-13020.	1.4	5
11	Optimizing Sensor Configurations for the Detection of Slow-Slip Earthquakes in Seafloor Pressure Records, Using the Cascadia Subduction Zone as a Case Study. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 13504-13531.	1.4	18
12	Upper Crustal V_p/V_s Ratios at the Endeavour Segment, Juan de Fuca Ridge, From Joint Inversion of P and S Traveltimes: Implications for Hydrothermal Circulation. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 208-229.	1.0	16
13	Seismic Imaging and Physical Properties of the Endeavour Segment: Evidence that Skew Between Mantle and Crustal Magmatic Systems Governs Spreading Center Processes. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 1319-1339.	1.0	16
14	Developing a Warning System for Inbound Tsunamis from the Cascadia Subduction Zone. , 2018, , .		2
15	Structure, Seismicity, and Accretionary Processes at the Hot Spot-Influenced Axial Seamount on the Juan de Fuca Ridge. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 4618-4646.	1.4	33
16	Observation and Modeling of Hydrothermal Response to the 2015 Eruption at Axial Seamount, Northeast Pacific. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 2780-2797.	1.0	10
17	The Role of the Ocean Observatories Initiative in Monitoring the Offshore Earthquake Activity of the Cascadia Subduction Zone. <i>Oceanography</i> , 2018, 31, 104-113.	0.5	12
18	A Tale of Two Eruptions: How Data from Axial Seamount Led to a Discovery on the East Pacific Rise. <i>Oceanography</i> , 2018, 31, 124-125.	0.5	5

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19	The Recent Volcanic History of Axial Seamount: Geophysical Insights into Past Eruption Dynamics with an Eye Toward Enhanced Observations of Future Eruptions. <i>Oceanography</i> , 2018, 31, 114-123.	0.5	34
20	Seismic evidence that black smoker heat flux is influenced by localized magma replenishment and associated increases in crustal permeability. <i>Geophysical Research Letters</i> , 2017, 44, 1687-1695.	1.5	17
21	Estimating range to a vocalizing fin whale using the timing and amplitude of multipath arrivals. <i>Journal of the Acoustical Society of America</i> , 2017, 142, 2101-2120.	0.5	6
22	Database of multi-parametric geophysical data from the TOMO-DEC experiment on Deception Island, Antarctica. <i>Scientific Data</i> , 2017, 4, 170128.	2.4	7
23	Spatial and temporal trends in fin whale vocalizations recorded in the NE Pacific Ocean between 2003-2013. <i>PLoS ONE</i> , 2017, 12, e0186127.	1.1	43
24	Estimating the location of baleen whale calls using dual streamers to support mitigation procedures in seismic reflection surveys. <i>PLoS ONE</i> , 2017, 12, e0171115.	1.1	4
25	Designing an offshore geophysical network in the Pacific Northwest for earthquake and tsunami early warning and hazard research. , 2016, , .		1
26	Seismic constraints on caldera dynamics from the 2015 Axial Seamount eruption. <i>Science</i> , 2016, 354, 1395-1399.	6.0	84
27	Near-axis crustal structure and thickness of the Endeavour Segment, Juan de Fuca Ridge. <i>Geophysical Research Letters</i> , 2016, 43, 5688-5695.	1.5	10
28	Dynamics of a seafloor-spreading episode at the East Pacific Rise. <i>Nature</i> , 2016, 540, 261-265.	18.7	39
29	Segmentation of mid-ocean ridges attributed to oblique mantle divergence. <i>Nature Geoscience</i> , 2016, 9, 636-642.	5.4	29
30	Next-generation seismic experiments II: wide-angle, multi-azimuth, 3-D, full-waveform inversion of sparse field data. <i>Geophysical Journal International</i> , 2016, 204, 1342-1363.	1.0	25
31	Planning for a Subduction Zone Observatory. <i>Eos</i> , 2016, 97, .	0.1	2
32	Sound source localization technique using a seismic streamer and its extension for whale localization during seismic surveys. <i>Journal of the Acoustical Society of America</i> , 2015, 138, 3951-3963.	0.5	2
33	The Cascadia Initiative: A Sea Change In Seismological Studies of Subduction Zones. <i>Oceanography</i> , 2014, 27, 138-150.	0.5	106
34	Sounds in the Ocean at 100 Hz. <i>Annual Review of Marine Science</i> , 2014, 6, 117-140.	5.1	67
35	Unusual signals recorded by ocean bottom seismometers in the flooded caldera of Deception Island volcano: volcanic gases or biological activity?. <i>Antarctic Science</i> , 2014, 26, 267-275.	0.5	12
36	Upper crustal seismic structure of the Endeavour segment, Juan de Fuca Ridge from traveltime tomography: Implications for oceanic crustal accretion. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 1296-1315.	1.0	34

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37	Source levels of fin whale 20â€‰Hz pulses measured in the Northeast Pacific Ocean. Journal of the Acoustical Society of America, 2013, 133, 741-749.	0.5	47
38	Fin whale tracks recorded by a seismic network on the Juan de Fuca Ridge, Northeast Pacific Ocean. Journal of the Acoustical Society of America, 2013, 133, 1751-1761.	0.5	42
39	Termination of a 6â€‰year ridgeâ€‰spreading event observed using a seafloor seismic network on the Endeavour Segment, Juan de Fuca Ridge. Geochemistry, Geophysics, Geosystems, 2013, 14, 1375-1398.	1.0	20
40	Tracking fin whales in the northeast Pacific Ocean with a seafloor seismic network. Journal of the Acoustical Society of America, 2012, 132, 2408-2419.	0.5	40
41	Endeavour Segment of the Juan de Fuca Ridge: One of the Most Remarkable Places on Earth. Oceanography, 2012, 25, 44-61.	0.5	65
42	Flow rate perturbations in a black smoker hydrothermal vent in response to a midâ€‰ocean ridge earthquake swarm. Geochemistry, Geophysics, Geosystems, 2010, 11, .	1.0	33
43	A seismic swarm and regional hydrothermal and hydrologic perturbations: The northern Endeavour segment, February 2005. Geochemistry, Geophysics, Geosystems, 2010, 11, .	1.0	20
44	The P-wave velocity structure of Deception Island, Antarctica, from two-dimensional seismic tomography. Journal of Volcanology and Geothermal Research, 2009, 180, 67-80.	0.8	30
45	Tidal triggering of earthquakes in the Northeast Pacific Ocean. Geophysical Journal International, 2009, 179, 1055-1070.	1.0	47
46	Toomey et al. reply. Nature, 2009, 458, E12-E13.	13.7	2
47	The role of magma injection in localizing black-smoker activity. Nature Geoscience, 2009, 2, 509-513.	5.4	67
48	A Siâ€‰Cl geothermobarometer for the reaction zone of highâ€‰temperature, basalticâ€‰hosted midâ€‰ocean ridge hydrothermal systems. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	43
49	Crustal structure of Deception Island volcano from <i>P</i> wave seismic tomography: Tectonic and volcanic implications. Journal of Geophysical Research, 2009, 114, .	3.3	66
50	Bathymetric constraints on the tectonic and volcanic evolution of Deception Island Volcano, South Shetland Islands. Antarctic Science, 2009, 21, 153-167.	0.5	31
51	Optical plume velocimetry: a new flow measurement technique for use in seafloor hydrothermal systems. Experiments in Fluids, 2008, 45, 899-915.	1.1	31
52	Observations of infragravity waves at the oceanâ€‰bottom broadband seismic stations Endeavour (KEBB) and Explorer (KXBB). Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	24
53	The Deployment of a Long-Term Seafloor Seismic Network on the Juan de Fuca Ridge. , 2007, , .		4
54	Physical controls on the salinity of mid-ocean ridge hydrothermal vent fluids. Earth and Planetary Science Letters, 2007, 257, 132-145.	1.8	44

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55	Seismic structure of the Endeavour Segment, Juan de Fuca Ridge: Correlations with seismicity and hydrothermal activity. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	95
56	Two-dimensional numerical models of open-top hydrothermal convection at high Rayleigh and Nusselt numbers: Implications for mid-ocean ridge hydrothermal circulation. <i>Geochemistry, Geophysics, Geosystems</i> , 2007, 8, .	1.0	46
57	Skew of mantle upwelling beneath the East Pacific Rise governs segmentation. <i>Nature</i> , 2007, 446, 409-414.	13.7	110
58	Dynamics and storage of brine in mid-ocean ridge hydrothermal systems. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	54
59	Seismic Attenuation Structure of the Seattle Basin, Washington State, from Explosive-Source Refraction Data. <i>Bulletin of the Seismological Society of America</i> , 2006, 96, 553-571.	1.1	13
60	The Sound Generated by Mid-Ocean Ridge Black Smoker Hydrothermal Vents. <i>PLoS ONE</i> , 2006, 1, e133.	1.1	29
61	Modeling the effects of tidal loading on mid-ocean ridge hydrothermal systems. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, n/a-n/a.	1.0	51
62	Diking, event plumes, and the subsurface biosphere at mid-ocean ridges. <i>Geophysical Monograph Series</i> , 2004, , 75-97.	0.1	8
63	Mixing, reaction and microbial activity in the sub-seafloor revealed by temporal and spatial variation in diffuse flow vents at axial volcano. <i>Geophysical Monograph Series</i> , 2004, , 269-289.	0.1	98
64	Studying the deep subsurface biosphere: Emerging technologies and applications. <i>Geophysical Monograph Series</i> , 2004, , 383-399.	0.1	4
65	Detection of and response to mid-ocean ridge magmatic events: Implications for the subsurface biosphere. <i>Geophysical Monograph Series</i> , 2004, , 227-243.	0.1	15
66	Distribution of unusual archaea in subsurface biosphere. <i>Geophysical Monograph Series</i> , 2004, , 369-381.	0.1	10
67	Upper crustal seismic velocity structure and microearthquake depths at the Endeavour Segment, Juan de Fuca Ridge. <i>Geochemistry, Geophysics, Geosystems</i> , 2004, 5, n/a-n/a.	1.0	17
68	Physical response of mid-ocean ridge hydrothermal systems to local earthquakes. <i>Geochemistry, Geophysics, Geosystems</i> , 2004, 5, n/a-n/a.	1.0	37
69	Volatiles in submarine environments: Food for life. <i>Geophysical Monograph Series</i> , 2004, , 167-189.	0.1	17
70	Significance of polysaccharides in microbial physiology and the ecology of hydrothermal vent environments. <i>Geophysical Monograph Series</i> , 2004, , 213-226.	0.1	5
71	Unifying principles of the deep terrestrial and deep marine biospheres. <i>Geophysical Monograph Series</i> , 2004, , 355-367.	0.1	9
72	Segment-scale variations in the crustal structure of 150-300 kyr old fast spreading oceanic crust (East Tj ETQq0 0 0 rgBT /Overlock 10 1 766-794.	1.0	97

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73	A numerical model of hydrothermal cooling and crustal accretion at a fast spreading mid-ocean ridge. <i>Geochemistry, Geophysics, Geosystems</i> , 2003, 4, n/a-n/a.	1.0	72
74	Microearthquakes on the Endeavour segment of the Juan de Fuca Ridge. <i>Journal of Geophysical Research</i> , 2002, 107, EPM 4-1-EPM 4-21.	3.3	68
75	Asymmetric mantle dynamics in the MELT region of the East Pacific Rise. <i>Earth and Planetary Science Letters</i> , 2002, 200, 287-295.	1.8	70
76	Laboratory studies of high Rayleigh number circulation in an open-top Hele-Shaw cell: An analog to mid-ocean ridge hydrothermal systems. <i>Journal of Geophysical Research</i> , 2001, 106, 10983-11000.	3.3	20
77	Tidal triggering of microearthquakes on the Juan de Fuca Ridge. <i>Geophysical Research Letters</i> , 2001, 28, 3999-4002.	1.5	111
78	Continuous Mantle Melt Supply Beneath an Overlapping Spreading Center on the East Pacific Rise. <i>Science</i> , 2001, 291, 1955-1958.	6.0	48
79	Seismic heterogeneity in the upper crust near the 1991 eruption site on the East Pacific Rise, 9°50'N. <i>Geophysical Research Letters</i> , 2000, 27, 2369-2372.	1.5	8
80	Seismic anisotropy of the shallow crust at the Juan de Fuca Ridge. <i>Geophysical Research Letters</i> , 2000, 27, 3109-3112.	1.5	9
81	Characteristics of high Rayleigh number two-dimensional convection in an open-top porous layer heated from below. <i>Journal of Fluid Mechanics</i> , 1999, 394, 241-260.	1.4	56
82	Cellular convection models of mid-ocean ridge hydrothermal circulation and the temperatures of black smoker fluids. <i>Journal of Geophysical Research</i> , 1998, 103, 2585-2596.	3.3	71
83	Mantle Seismic Structure Beneath the MELT Region of the East Pacific Rise from P and S Wave Tomography. <i>Science</i> , 1998, 280, 1224-1227.	6.0	123
84	The Quantum Event of Oceanic Crustal Accretion: Impacts of Diking at Mid-Ocean Ridges. , 1998, 281, 222-230.		172
85	A model for the formation of transient event plumes above mid-ocean ridge hydrothermal systems. <i>Journal of Geophysical Research</i> , 1997, 102, 12109-12121.	3.3	29
86	Thermal fluxes associated with the 1993 diking event on the CoAxial segment, Juan de Fuca Ridge: A model for the convective cooling of a dike. <i>Journal of Geophysical Research</i> , 1997, 102, 24887-24902.	3.3	48
87	Exploration Seismology, 2nd edition. <i>Continental Shelf Research</i> , 1997, 17, 583-584.	0.9	6
88	Estimates of crustal permeability on the endeavour segment of the Juan de Fuca mid-ocean ridge. <i>Earth and Planetary Science Letters</i> , 1996, 138, 83-91.	1.8	56
89	Mid-ocean ridge sulfide deposits: Evidence for heat extraction from magma chambers or cracking fronts?. <i>Earth and Planetary Science Letters</i> , 1996, 145, 49-64.	1.8	140
90	Seismic attenuation structure of the East Pacific Rise near 9°30'N. <i>Journal of Geophysical Research</i> , 1995, 100, 24147-24165.	3.3	57

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91	The shallow attenuation structure of the fast-spreading East Pacific Rise near 9°30'N. Geophysical Research Letters, 1994, 21, 321-324.	1.5	33
92	The renavigation of Sea Beam bathymetric data between 9½° N and 10½° N on the East Pacific Rise. Marine Geophysical Researches, 1993, 15, 1-12.	0.5	27
93	Seismic propagation across the East Pacific Rise: Finite difference experiments and implications for seismic tomography. Journal of Geophysical Research, 1993, 98, 19913-19932.	3.3	24
94	The Seismic Attenuation Structure of a Fast-Spreading Mid-Ocean Ridge. Science, 1992, 258, 1470-1474.	6.0	70
95	Microearthquakes on and near the East Pacific Rise, 9°-10°N. Geophysical Research Letters, 1992, 19, 2131-2134.	1.5	34
96	The three-dimensional seismic velocity structure of the East Pacific Rise near latitude 9° 30' N. Nature, 1990, 347, 639-645.	13.7	261
97	Rotational Seismology with a Quartz Rotation Sensor. Seismological Research Letters, 0, , .	0.8	2