Laura M Wallace

List of Publications by Year
in descending order

128 papers	7,209 citations	53660 45 h-index	60497 81 g-index
140 all docs	140 docs citations	140 times ranked	3865 citing authors

#	Article	IF	Citations
1	Subduction zone coupling and tectonic block rotations in the North Island, New Zealand. Journal of Geophysical Research, 2004, 109, .	3.3	459
2	Complex multifault rupture during the 2016 <i>M</i> _w 7.8 KaikÅura earthquake, New Zealand. Science, 2017, 356, .	6.0	457
3	National Seismic Hazard Model for New Zealand: 2010 Update. Bulletin of the Seismological Society of America, 2012, 102, 1514-1542.	1.1	359
4	Diverse slow slip behavior at the Hikurangi subduction margin, New Zealand. Journal of Geophysical Research, 2010, 115, .	3.3	257
5	Slow slip near the trench at the Hikurangi subduction zone, New Zealand. Science, 2016, 352, 701-704.	6.0	242
6	Recurring and triggered slow-slip events near the trench at the Nankai Trough subduction megathrust. Science, 2017, 356, 1157-1160.	6.0	222
7	Balancing the plate motion budget in the South Island, New Zealand using GPS, geological and seismological data. Geophysical Journal International, 2007, 168, 332-352.	1.0	217
8	The frictional, hydrologic, metamorphic and thermal habitat of shallow slow earthquakes. Nature Geoscience, 2015, 8, 594-600.	5.4	216
9	The 2016 KaikÅura, New Zealand, Earthquake: Preliminary Seismological Report. Seismological Research Letters, 2017, 88, 727-739.	0.8	170
10	Simultaneous longâ€term and shortâ€term slow slip events at the Hikurangi subduction margin, New Zealand: Implications for processes that control slow slip event occurrence, duration, and migration. Journal of Geophysical Research, 2012, 117, .	3.3	166
11	Tectonic evolution of the active Hikurangi subduction margin, New Zealand, since the Oligocene. Tectonics, 2007, 26, .	1.3	162
12	Seismic reflection character of the Hikurangi subduction interface, New Zealand, in the region of repeated Gisborne slow slip events. Geophysical Journal International, 2010, 180, 34-48.	1.0	160
13	The kinematics of a transition from subduction to strikeâ€slip: An example from the central New Zealand plate boundary. Journal of Geophysical Research, 2012, 117, .	3.3	159
14	GPS and seismological constraints on active tectonics and arc-continent collision in Papua New Guinea: Implications for mechanics of microplate rotations in a plate boundary zone. Journal of Geophysical Research, 2004, 109, .	3.3	146
15	Characterizing the seismogenic zone of a major plate boundary subduction thrust: Hikurangi Margin, New Zealand. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	142
16	Slow slip on the northern Hikurangi subduction interface, New Zealand. Geophysical Research Letters, 2005, 32, .	1.5	136
17	Large-scale dynamic triggering of shallow slow slip enhanced by overlying sedimentary wedge. Nature Geoscience, 2017, 10, 765-770.	5.4	119
18	Rapid microplate rotations and backarc rifting at the transition between collision and subduction. Geology, 2005, 33, 857.	2.0	113

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19	Slow slip and frictional transition at lowÂtemperature at the Hikurangi subductionÂzone. Nature Geoscience, 2008, 1, 316-320.	5.4	108
20	Episodic stress and fluid pressure cycling in subducting oceanic crust during slow slip. Nature Geoscience, 2019, 12, 475-481.	5.4	101
21	Volcano-tectonic interactions during rapid plate-boundary evolution in the Kyushu region, SW Japan. Bulletin of the Geological Society of America, 2011, 123, 2201-2223.	1.6	98
22	Collisional model for rapid foreâ€arc block rotations, arc curvature, and episodic backâ€arc rifting in subduction settings. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	96
23	Slow slip source characterized by lithological and geometric heterogeneity. Science Advances, 2020, 6, eaay3314.	4.7	95
24	A large slow slip event on the central Hikurangi subduction interface beneath the Manawatu region, North Island, New Zealand. Geophysical Research Letters, 2006, 33, .	1.5	91
25	Do great earthquakes occur on the Alpine Fault in central South Island, New Zealand?. Geophysical Monograph Series, 2007, , 235-251.	0.1	84
26	Temporal stability of deformation rates: Comparison of geological and geodetic observations, Hikurangi subduction margin, New Zealand. Earth and Planetary Science Letters, 2007, 258, 397-413.	1.8	83
27	Timeâ€dependent modeling of slow slip events and associated seismicity and tremor at the Hikurangi subduction zone, New Zealand. Journal of Geophysical Research: Solid Earth, 2014, 119, 734-753.	1.4	79
28	Enigmatic, highly active left-lateral shear zone in southwest Japan explained by aseismic ridge collision. Geology, 2009, 37, 143-146.	2.0	77
29	Earthquakes and Tremor Linked to Seamount Subduction During Shallow Slow Slip at the Hikurangi Margin, New Zealand. Journal of Geophysical Research: Solid Earth, 2018, 123, 6769-6783.	1.4	76
30	Triggered Slow Slip and Afterslip on the Southern Hikurangi Subduction Zone Following the KaikÅura Earthquake. Geophysical Research Letters, 2018, 45, 4710-4718.	1.5	73
31	Feedback between rifting and diapirism can exhume ultrahigh-pressure rocks. Earth and Planetary Science Letters, 2011, 311, 427-438.	1.8	72
32	Geophysical Constraints on the Relationship Between Seamount Subduction, Slow Slip, and Tremor at the North Hikurangi Subduction Zone, New Zealand. Geophysical Research Letters, 2018, 45, 12,804.	1.5	72
33	Nearâ€field observations of an offshore <i>M_w</i> 6.0 earthquake from an integrated seafloor and subseafloor monitoring network at the Nankai Trough, southwest Japan. Journal of Geophysical Research: Solid Earth, 2016, 121, 8338-8351.	1.4	71
34	Slow Slip Events in New Zealand. Annual Review of Earth and Planetary Sciences, 2020, 48, 175-203.	4.6	69
35	Coralgal composition of drowned carbonate platforms in the Huon Gulf, Papua New Guinea; implications for lowstand reef development and drowning. Marine Geology, 2004, 204, 59-89.	0.9	67
36	Newly observed, deep slow slip events at the central Hikurangi margin, New Zealand: Implications for downdip variability of slow slip and tremor, and relationship to seismic structure. Geophysical Research Letters, 2013, 40, 5393-5398.	1.5	66

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37	Paleoecological insights into subduction zone earthquake occurrence, eastern North Island, New Zealand. Bulletin of the Geological Society of America, 2006, 118, 1051-1074.	1.6	63
38	Coral reef evolution on rapidly subsiding margins. Global and Planetary Change, 2009, 66, 129-148.	1.6	63
39	Fluid budgets along the northern Hikurangi subduction margin, New Zealand: the effect of a subducting seamount on fluid pressure. Geophysical Journal International, 2015, 202, 277-297.	1.0	62
40	The Darfield (Canterbury) earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 228-235.	0.2	60
41	Tsunami Hazard Posed to New Zealand by the Kermadec and Southern New Hebrides Subduction Margins: An Assessment Based on Plate Boundary Kinematics, Interseismic Coupling, and Historical Seismicity. Pure and Applied Geophysics, 2012, 169, 1-36.	0.8	59
42	New Zealand GPS velocity field: 1995â€"2013. New Zealand Journal of Geology, and Geophysics, 2016, 59, 5-14.	1.0	57
43	Deep tremor in New Zealand triggered by the 2010 Mw8.8 Chile earthquake. Geophysical Research Letters, 2011, 38, .	1.5	56
44	Continental breakup and UHP rock exhumation in action: GPS results from the <scp>W</scp>oodlark <scp>R</scp>ift, <scp>P</scp>apua <scp>N</scp>ew <scp>G</scp>uinea. Geochemistry, Geophysics, Geosystems, 2014, 15, 4267-4290.	1.0	54
45	Rapid Evolution of Subductionâ€Related Continental Intraarc Rifts: The Taupo Rift, New Zealand. Tectonics, 2017, 36, 2250-2272.	1.3	52
46	Crustal deformation and stress transfer during a propagating earthquake sequence: The 2013 Cook Strait sequence, central New Zealand. Journal of Geophysical Research: Solid Earth, 2014, 119, 6080-6092.	1.4	45
47	Evidence for Past Subduction Earthquakes at a Plate Boundary with Widespread Upper Plate Faulting: Southern Hikurangi Margin, New Zealand. Bulletin of the Seismological Society of America, 2015, 105, 1661-1690.	1.1	44
48	Effects of material property variations on slip estimates for subduction interface slowâ€slip events. Geophysical Research Letters, 2015, 42, 1113-1121.	1.5	38
49	Kinematic constraints from GPS on oblique convergence of the Pacific and Australian Plates, central South Island, New Zealand. Geophysical Monograph Series, 2007, , 75-94.	0.1	37
50	Tsunami inundation in Napier, New Zealand, due to local earthquake sources. Natural Hazards, 2014, 70, 415-445.	1.6	37
51	The Impact of Realistic Elastic Properties on Inversions of Shallow Subduction Interface Slow Slip Events Using Seafloor Geodetic Data. Geophysical Research Letters, 2018, 45, 7462-7470.	1.5	35
52	New Insights into the present-day kinematics of the central and western Papua New Guinea from GPS. Geophysical Journal International, 2015, 202, 993-1004.	1.0	33
53	Upper plate tectonic stress state may influence interseismic coupling on subduction megathrusts. Geology, 2012, 40, 895-898.	2.0	31
54	Ultraâ€long Duration of Seismic Ground Motion Arising From a Thick, Lowâ€Velocity Sedimentary Wedge. Journal of Geophysical Research: Solid Earth, 2019, 124, 10347-10359.	1.4	31

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55	A future magma inflation event under the rhyolitic Taupo volcano, New Zealand: Numerical models based on constraints from geochemical, geological, and geophysical data. Journal of Volcanology and Geothermal Research, 2007, 168, 1-27.	0.8	30
56	New Zealandâ€Wide Geodetic Strain Rates Using a Physicsâ€Based Approach. Geophysical Research Letters, 2020, 47, e2019GL084606.	1.5	30
57	High-resolution view of active tectonic deformation along the Hikurangi subduction margin and the Taupo Volcanic Zone, New Zealand. New Zealand Journal of Geology, and Geophysics, 2016, 59, 43-57.	1.0	29
58	Numerical modeling of the growth and drowning of Hawaiian coral reefs during the last two glacial cycles (0-250 kyr). Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	1.0	28
59	Quake clamps down on slow slip. Geophysical Research Letters, 2014, 41, 8840-8846.	1.5	27
60	New Opportunities to Study Earthquake Precursors. Seismological Research Letters, 2020, 91, 2444-2447.	0.8	27
61	Drowned carbonate platforms in the Huon Gulf, Papua New Guinea. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	1.0	26
62	Evolution of a rapidly slipping, active low-angle normal fault, Suckling-Dayman metamorphic core complex, SE Papua New Guinea. Bulletin of the Geological Society of America, 2019, 131, 1333-1363.	1.6	26
63	Seismicity at the Northern Hikurangi Margin, New Zealand, and Investigation of the Potential Spatial and Temporal Relationships With a Shallow Slow Slip Event. Journal of Geophysical Research: Solid Earth, 2019, 124, 4751-4766.	1.4	25
64	Splay fault branching from the <scp>H</scp>ikurangi subduction shear zone: Implications for slow slip and fluid flow. Geochemistry, Geophysics, Geosystems, 2016, 17, 5009-5023.	1.0	23
65	Salt-marsh foraminiferal record of 10 large Holocene (last 7500 yr) earthquakes on a subducting plate margin, Hawkes Bay, New Zealand. Bulletin of the Geological Society of America, 2016, 128, 896-915.	1.6	23
66	Slow slip events and the 2016 Te Araroa <i>M</i>_{<i>w</i>} 7.1 earthquake interaction: Northern Hikurangi subduction, New Zealand. Geophysical Research Letters, 2017, 44, 8336-8344.	1.5	22
67	How fast can low-angle normal faults slip? Insights from cosmogenic exposure dating of the active Maiâ€™iu fault, Papua New Guinea. Geology, 2018, 46, 227-230.	2.0	22
68	Coastal uplift mechanisms at Pakarae River mouth: Constraints from a combined Holocene fluvial and marine terrace dataset. Marine Geology, 2010, 270, 72-83.	0.9	20
69	Earthquake and Tsunami Potential of the Hikurangi Subduction Thrust, New Zealand: Insights from Paleoseismology, GPS, and Tsunami Modeling. Oceanography, 2014, 27, 104-117.	0.5	20
70	Development of the Global Earthquake Modelâ€™s neotectonic fault database. Natural Hazards, 2015, 79, 111-135.	1.6	20
71	Contemporary ground deformation in the Taupo Rift and Okataina Volcanic Centre from 1998 to 2011, measured using GPS. Geophysical Journal International, 2015, 202, 2082-2105.	1.0	20
72	Simple Physical Model for the Probability of a Subductionâ€•Zone Earthquake Following Slow Slip Events and Earthquakes: Application to the Hikurangi Megathrust, New Zealand. Geophysical Research Letters, 2018, 45, 3932-3941.	1.5	20

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73	Seafloor Crustal Deformation on Ocean Bottom Pressure Records With Nontidal Variability Corrections: Application to Hikurangi Margin, New Zealand. Geophysical Research Letters, 2019, 46, 303-310.	1.5	20
74	Temporal and spatial variations in seismic anisotropy and V/V ratios in a region of slow slip. Earth and Planetary Science Letters, 2020, 532, 115970.	1.8	20
75	Physical Properties and Gas Hydrate at a Nearâ€Seafloor Thrust Fault, Hikurangi Margin, New Zealand. Geophysical Research Letters, 2020, 47, e2020GL088474.	1.5	20
76	Slow Slip Events on the Hikurangi Subduction Interface, New Zealand. , 2007, , 438-444.		20
77	Investigating subduction earthquake geology along the southern Hikurangi margin using palaeoenvironmental histories of intertidal inlets. New Zealand Journal of Geology, and Geophysics, 2011, 54, 255-271.	1.0	18
78	Increased rates of largeâ€magnitude explosive eruptions in Japan in the late Neogene and Quaternary. Geochemistry, Geophysics, Geosystems, 2016, 17, 2467-2479.	1.0	18
79	Variable Holocene deformation above a shallow subduction zone extremely close to the trench. Nature Communications, 2015, 6, 7607.	5.8	17
80	The occurrence and hazards of great subduction zone earthquakes. Nature Reviews Earth & Environment, 2022, 3, 125-140.	12.2	17
81	A Snapshot of New Zealand's Dynamic Deformation Field From Envisat InSAR and GNSS Observations Between 2003 and 2011. Geophysical Research Letters, 2022, 49, .	1.5	17
82	Preliminary Probabilistic Seismic Hazard Analysis of the CO2CRC Otway Project Site, Victoria, Australia. Bulletin of the Seismological Society of America, 2011, 101, 2726-2736.	1.1	16
83	The Hikurangi Margin Continuous GNSS and Seismograph Network of New Zealand. Seismological Research Letters, 2015, 86, 101-108.	0.8	16
84	Using Tsunami Waves Reflected at the Coast to Improve Offshore Earthquake Source Parameters: Application to the 2016 Mw 7.1 Te Araroa Earthquake, New Zealand. Journal of Geophysical Research: Solid Earth, 2018, 123, 8767-8779.	1.4	16
85	Frictional and Lithological Controls on Shallow Slow Slip at the Northern Hikurangi Margin. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	16
86	Mechanical Implications of Creep and Partial Coupling on the World's Fastest Slipping Lowâ€Angle Normal Fault in Southeastern Papua New Guinea. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020117.	1.4	15
87	Enhanced Surface Imaging of Crustal Deformation. SpringerBriefs in Earth Sciences, 2015, , .	0.5	15
88	Physical conditions and frictional properties in the source region of a slow-slip event. Nature Geoscience, 2021, 14, 334-340.	5.4	14
89	The Mw 6.6 Gisborne earthquake of 2007. Bulletin of the New Zealand Society for Earthquake Engineering, 2008, 41, 266-277.	0.2	14
90	SMART Subsea Cables for Observing the Earth and Ocean, Mitigating Environmental Hazards, and Supporting the Blue Economy. Frontiers in Earth Science, 2022, 9, .	0.8	13

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91	The role of the upper plate in controlling fluid-mobile element (Cl, Li, B) cycling through subduction zones: Hikurangi forearc, New Zealand. , 2019, 15, 642-658.		12
92	Threeâ€Dimensional Modeling of Spontaneous and Triggered Slowâ€Slip Events at the Hikurangi Subduction Zone, New Zealand. Journal of Geophysical Research: Solid Earth, 2019, 124, 13250-13268.	1.4	12
93	Silent triggering: Aseismic crustal faulting induced by a subduction slow slip event. Earth and Planetary Science Letters, 2015, 421, 13-19.	1.8	11
94	Foraminiferal record of Holocene paleo-earthquakes on the subsiding south-western Poverty Bay coastline, New Zealand. New Zealand Journal of Geology, and Geophysics, 2015, 58, 104-122.	1.0	11
95	Observations of Laboratory and Natural Slow Slip Events: Hikurangi Subduction Zone, New Zealand. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008717.	1.0	11
96	Changes in Physical Properties of the Nankai Trough Megasplay Fault Induced by Earthquakes, Detected by Continuous Pressure Monitoring. Journal of Geophysical Research: Solid Earth, 2018, 123, 1072-1088.	1.4	10
97	Quaternary Tectonics of New Zealand. , 2017, , 1-34.		10
98	The New Zealand Probabilistic Tsunami Hazard Model: development and implementation of a methodology for estimating tsunami hazard nationwide. Geological Society Special Publication, 2018, 456, 199-217.	0.8	9
99	Timeâ€Dependent Behavior of a Nearâ€Trench Slowâ€Slip Event at the Hikurangi Subduction Zone. Geochemistry, Geophysics, Geosystems, 2019, 20, 4292-4304.	1.0	9
100	Tectonic Inheritance Following Failed Continental Subduction: A Model for Core Complex Formation in Cold, Strong Lithosphere. Tectonics, 2019, 38, 1742-1763.	1.3	9
101	Water Depth Dependence of Longâ€Range Correlation in Nontidal Variations in Seafloor Pressure. Geophysical Research Letters, 2021, 48, e2020GL092173.	1.5	9
102	Understanding the potential for tsunami generated by earthquakes on the southern Hikurangi subduction interface. New Zealand Journal of Geology, and Geophysics, 2016, 59, 70-85.	1.0	8
103	Variable In Situ Stress Orientations Across the Northern Hikurangi Subduction Margin. Geophysical Research Letters, 2021, 48, e2020GL091707.	1.5	8
104	Crustal Structure of the Hikurangi Margin From SHIRE Seismic Data and the Relationship Between Forearc Structure and Shallow Megathrust Slip Behavior. Geophysical Research Letters, 2022, 49, .	1.5	8
105	Evidence of Holocene uplift in east New Britain, Papua New Guinea. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	7
106	Slow Slip Event Detection in Cascadia Using Vertical Derivatives of Horizontal Stress Rates. Journal of Geophysical Research: Solid Earth, 2019, 124, 5153-5173.	1.4	7
107	Emerged Coral Reefs Record Holocene Lowâ€Angle Normal Fault Earthquakes. Geophysical Research Letters, 2020, 47, e2020GL089301.	1.5	6
108	Seafloor overthrusting causes ductile fault deformation and fault sealing along the Northern Hikurangi Margin. Earth and Planetary Science Letters, 2022, 593, 117651.	1.8	6

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109	Subduction Systems Revealed: Studies of the Hikurangi Margin. Eos, 2010, 91, 417-418.	0.1	5
110	Calculating regional stresses for northern Canterbury: the effect of the 2010 Darfield earthquake. New Zealand Journal of Geology, and Geophysics, 2016, 59, 202-212.	1.0	5
111	Using global positioning system data to assess tectonic hazards. , 0, , 156-175.		5
112	Multi-disciplinary probabilistic tectonic hazard analysis. , 0, , 257-275.		5
113	Spatial Variation of Shallow Stress Orientation Along the Hikurangi Subduction Margin: Insights From Inâ€Situ Borehole Image Logging. Journal of Geophysical Research: Solid Earth, 2022, 127, .	1.4	5
114	Tectonic block rotation, arc curvature, and back-arc rifting: Insights into these processes in the Mediterranean and the western Pacific. IOP Conference Series: Earth and Environmental Science, 2008, 2, 012010.	0.2	4
115	Paleomagnetic evidence for verticalâ€axis rotations of crustal blocks in the <scp>W</scp>oodlark <scp>R</scp>ift, <scp>SE</scp><scp>P</scp>apua <scp>N</scp>ew <scp>G</scp>uinea: Miocene to presentâ€day kinematics in one of the world's most rapidly extending plate boundary zones. Geochemistry, Geophysics, Geosystems, 2015, 16, 2058-2081.	1.0	4
116	Sea Surface Gravity Waves Excited by Dynamic Ground Motions from Large Regional Earthquakes. Seismological Research Letters, 2020, 91, 2268-2277.	0.8	4
117	Asymmetric Brittle Deformation at the PÄpaku Fault, Hikurangi Subduction Margin, NZ, IODP Expedition 375. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009662.	1.0	4
118	Segmentation of Shallow Slow Slip Events at the Hikurangi Subduction Zone Explained by Alongâ€Strike Changes in Fault Geometry and Plate Convergence Rates. Journal of Geophysical Research: Solid Earth, 2022, 127, .	1.4	4
119	Temporal velocity variations in the northern Hikurangi margin and the relation to slow slip. Earth and Planetary Science Letters, 2022, 584, 117443.	1.8	4
120	Slow Motion Earthquakes: Taking the Pulse of Slow Slip with Scientific Ocean Drilling. Oceanography, 2019, 32, 106-118.	0.5	3
121	Continuous Tremor Activity With Stable Polarization Direction Following the 2014 Large Slow Slip Event in the Hikurangi Subduction Margin Offshore New Zealand. Journal of Geophysical Research: Solid Earth, 2022, 127, e2021JB022161.	1.4	3
122	Introduction to<i>NZJGG</i>special issue in honour of John Beavan's scientific contributions. New Zealand Journal of Geology, and Geophysics, 2016, 59, 1-4.	1.0	2
123	Developing community-based scientific priorities and new drilling proposals in the southern Indian and southwestern Pacific oceans. Scientific Drilling, 0, 24, 61-70.	1.0	2
124	Investigations of Shallow Slow Slip Offshore of New Zealand. Eos, 2016, 97, .	0.1	1
125	Exploring new drilling prospects in the southwest Pacific. Scientific Drilling, 0, 17, 45-50.	1.0	1
126	John Beavan (1950â€“2012). Eos, 2013, 94, 55-55.	0.1	0

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127	Editorial: Frontiers in Seafloor Geodesy. Frontiers in Earth Science, 2021, 9, .	0.8	0
128	Application to Central South Island, New Zealand. SpringerBriefs in Earth Sciences, 2015, , 63-75.	0.5	0