

# Serge Lallemand

## List of Publications by Year in descending order

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111  
papers

8,691  
citations

38660

50  
h-index

43802

91  
g-index

120  
all docs

120  
docs citations

120  
times ranked

5071  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the relationships between slab dip, back-arc stress, upper plate absolute motion, and crustal nature in subduction zones. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, n/a-n/a.	1.0	409
2	Plate motions, slab dynamics and back-arc deformation. <i>Physics of the Earth and Planetary Interiors</i> , 2005, 149, 31-51.	0.7	389
3	Tectonic erosion along the Japan and Peru convergent margins. <i>Bulletin of the Geological Society of America</i> , 1990, 102, 704-720.	1.6	339
4	Tectonic segmentation of the North Andean margin: impact of the Carnegie Ridge collision. <i>Earth and Planetary Science Letters</i> , 1999, 168, 255-270.	1.8	325
5	Subduction of the Daiichi Kashima Seamount in the Japan Trench. <i>Tectonophysics</i> , 1989, 160, 231-247.	0.9	315
6	Okinawa trough backarc basin: Early tectonic and magmatic evolution. <i>Journal of Geophysical Research</i> , 1998, 103, 30245-30267.	3.3	312
7	Coulomb theory applied to accretionary and nonaccretionary wedges: Possible causes for tectonic erosion and/or frontal accretion. <i>Journal of Geophysical Research</i> , 1994, 99, 12033-12055.	3.3	282
8	Upper plate deformation associated with seamount subduction. <i>Tectonophysics</i> , 1998, 293, 207-224.	0.9	262
9	Deformation of accretionary wedges in response to seamount subduction: Insights from sandbox experiments. <i>Tectonics</i> , 2000, 19, 182-196.	1.3	247
10	Subduction-triggered magmatic pulses: A new class of plumes?. <i>Earth and Planetary Science Letters</i> , 2010, 299, 54-68.	1.8	211
11	Japan Sea: a pull-apart basin?. <i>Earth and Planetary Science Letters</i> , 1986, 76, 375-389.	1.8	205
12	New insights on 3-D plates interaction near Taiwan from tomography and tectonic implications. <i>Tectonophysics</i> , 2001, 335, 229-253.	0.9	191
13	The giant Ruatoria debris avalanche on the northern Hikurangi margin, New Zealand: Result of oblique seamount subduction. <i>Journal of Geophysical Research</i> , 2001, 106, 19271-19297.	3.3	178
14	The West Philippine Basin: An Eocene to early Oligocene back arc basin opened between two opposed subduction zones. <i>Journal of Geophysical Research</i> , 2002, 107, EPM 1-1-EPM 1-24.	3.3	170
15	Trench migration, net rotation and slab-mantle coupling. <i>Earth and Planetary Science Letters</i> , 2008, 271, 233-240.	1.8	164
16	Cyclical behavior of thrust wedges: Insights from high basal friction sandbox experiments. <i>Geology</i> , 1996, 24, 135.	2.0	161
17	Physical characteristics of subduction interface type seismogenic zones revisited. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, n/a-n/a.	1.0	161
18	Hypocentre determination offshore of eastern Taiwan using the Maximum Intersection method. <i>Geophysical Journal International</i> , 2004, 158, 655-675.	1.0	145

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19	Effects of oceanic ridge subduction on accretionary wedges: Experimental modeling and marine observations. <i>Tectonics</i> , 1992, 11, 1301-1313.	1.3	137
20	Relation between subduction megathrust earthquakes, trench sediment thickness and upper plate strain. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	135
21	Plate kinematics, slab shape and back-arc stress: A comparison between laboratory models and current subduction zones. <i>Earth and Planetary Science Letters</i> , 2007, 256, 473-483.	1.8	133
22	The dammed Hikurangi Trough: a channelâ€fed trench blocked by subducting seamounts and their wake avalanches (New Zealandâ€France GeodyNZ Project). <i>Basin Research</i> , 1998, 10, 441-468.	1.3	132
23	Episodic imbricate thrusting and underthrusting: Analog experiments and mechanical analysis applied to the Alaskan Accretionary Wedge. <i>Journal of Geophysical Research</i> , 1998, 103, 10161-10176.	3.3	129
24	Material transfer in accretionary wedges from analysis of a systematic series of analog experiments. <i>Journal of Structural Geology</i> , 1998, 20, 407-416.	1.0	123
25	Coulomb wedge model applied to the subduction of seamounts in the Japan Trench. <i>Geology</i> , 1987, 15, 1065.	2.0	119
26	Evidence for Early Cretaceous oceanic crust trapped in the Philippine Sea Plate. <i>Earth and Planetary Science Letters</i> , 2000, 179, 503-516.	1.8	117
27	From oblique subduction to intra-continental transpression: Structures of the southern Kermadec-Hikurangi margin from multibeam bathymetry, side-scan sonar and seismic reflection. <i>Marine Geophysical Researches</i> , 1996, 18, 357-381.	0.5	116
28	Reconciling strong slab pull and weak plate bending: The plate motion constraint on the strength of mantle slabs. <i>Earth and Planetary Science Letters</i> , 2008, 272, 412-421.	1.8	110
29	Subduction dynamics as revealed by trench migration. <i>Tectonics</i> , 2008, 27, .	1.3	108
30	Strain partitioning and interplate friction in oblique subduction zones: Constraints provided by experimental modeling. <i>Journal of Geophysical Research</i> , 2000, 105, 5567-5581.	3.3	103
31	Digital Elevation Model Offshore Taiwan and Its Tectonic Implications. <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 1998, 9, 705.	0.3	101
32	Predicting trench and plate motion from the dynamics of a strong slab. <i>Earth and Planetary Science Letters</i> , 2007, 257, 29-36.	1.8	89
33	Trench-parallel stretching and folding of forearc basins and lateral migration of the accretionary wedge in the southern Ryukyus: A case of strain partition caused by oblique convergence. <i>Tectonics</i> , 1999, 18, 231-247.	1.3	88
34	The Japan Trench and its juncture with the Kuril Trench: cruise results of the Kaiko project, Leg 3. <i>Earth and Planetary Science Letters</i> , 1987, 83, 267-284.	1.8	83
35	New Gravity and Magnetic Anomaly Maps in the Taiwan-Luzon Region and Their Preliminary Interpretation. <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 1998, 9, 509.	0.3	83
36	Philippine Sea Plate inception, evolution, and consumption with special emphasis on the early stages of Izu-Bonin-Mariana subduction. <i>Progress in Earth and Planetary Science</i> , 2016, 3, .	1.1	80

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37	Deep scientific dives in the Japan and Kuril Trenches. <i>Earth and Planetary Science Letters</i> , 1987, 83, 313-328.	1.8	77
38	Fluid venting activity within the eastern Nankai trough accretionary wedge: A summary of the 1989 Kaiko-Nankai results. <i>Earth and Planetary Science Letters</i> , 1992, 109, 303-318.	1.8	77
39	Mechanical decoupling and basal duplex formation observed in sandbox experiments with application to the Western Mediterranean Ridge accretionary complex. <i>Marine Geology</i> , 2002, 186, 29-42.	0.9	75
40	Machine Learning Can Predict the Timing and Size of Analog Earthquakes. <i>Geophysical Research Letters</i> , 2019, 46, 1303-1311.	1.5	65
41	Normal faulting of the Daiichi-Kashima Seamount in the Japan Trench revealed by the Kaiko I cruise, Leg 3. <i>Earth and Planetary Science Letters</i> , 1987, 83, 257-266.	1.8	64
42	On the role of slab pull in the Cenozoic motion of the Pacific plate. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	62
43	Title is missing!. <i>Marine Geophysical Researches</i> , 1998, 20, 383-402.	0.5	61
44	Genetic relations between the central and southern Philippine Trench and the Sangihe Trench. <i>Journal of Geophysical Research</i> , 1998, 103, 933-950.	3.3	61
45	A tear fault boundary between the Taiwan orogen and the Ryukyu subduction zone. <i>Tectonophysics</i> , 1997, 274, 171-190.	0.9	56
46	Title is missing!. <i>Marine Geophysical Researches</i> , 1998, 20, 403-423.	0.5	56
47	Deformation Patterns of an Accretionary Wedge in the Transition Zone from Subduction to Collision Offshore Southwestern Taiwan. <i>Marine Geophysical Researches</i> , 2004, 25, 123-137.	0.5	54
48	Collapse in a Quaternary shelf basin off East Cape, New Zealand: Evidence for passage of a subducted seamount inboard of the Ruatoria giant avalanche. <i>New Zealand Journal of Geology, and Geophysics</i> , 2004, 47, 415-429.	1.0	54
49	Dynamics of the Ryukyu/Izu-Bonin-Marianas double subduction system. <i>Tectonophysics</i> , 2018, 746, 229-238.	0.9	54
50	Back-arc strain in subduction zones: Statistical observations versus numerical modeling. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	52
51	Subduction initiation from the earliest stages to self-sustained subduction: Insights from the analysis of 70 Cenozoic sites. <i>Earth-Science Reviews</i> , 2021, 221, 103779.	4.0	52
52	High rates of arc consumption by subduction processes: Some consequences. <i>Geology</i> , 1995, 23, 551.	2.0	51
53	Sediment accretion against a buttress beneath the Peruvian continental margin at 12° S as simulated with sandbox modeling. <i>Geologische Rundschau: Zeitschrift Fur Allgemeine Geologie</i> , 1994, 83, 822-831.	1.3	50
54	Structural insight into the south Ryukyu margin: effects of the subducting Gagua Ridge. <i>Tectonophysics</i> , 1998, 288, 237-250.	0.9	48

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55	Constraints on backstop geometry of the southwest Ryukyu subduction based on reflection seismic data. <i>Tectonophysics</i> , 2001, 333, 135-158.	0.9	46
56	Fluid venting along Japanese trenches: tectonic context and thermal modeling. <i>Tectonophysics</i> , 1989, 160, 277-291.	0.9	44
57	How Subduction Interface Roughness Influences the Occurrence of Large Interplate Earthquakes. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 2342-2370.	1.0	43
58	Seafloor manifestations of fluid seepage at the top of a 2000-metre-deep ridge in the eastern Nankai accretionary wedge: Long-lived venting and tectonic implications. <i>Earth and Planetary Science Letters</i> , 1992, 109, 333-346.	1.8	42
59	Control of seafloor aging on the migration of the Izu-Bonin-Mariana trench. <i>Earth and Planetary Science Letters</i> , 2009, 288, 386-398.	1.8	41
60	Roughness Characteristics of Oceanic Seafloor Prior to Subduction in Relation to the Seismogenic Potential of Subduction Zones. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 2121-2146.	1.0	41
61	Reconstruction of subduction zone paleogeometries and quantification of upper plate material losses caused by tectonic erosion. <i>Journal of Geophysical Research</i> , 1992, 97, 217-239.	3.3	40
62	Control of asperities size and spacing on seismic behavior of subduction megathrusts. <i>Geophysical Research Letters</i> , 2017, 44, 8227-8235.	1.5	37
63	Eocene intra-plate shortening responsible for the rise of a faunal pathway in the northeastern Caribbean realm. <i>PLoS ONE</i> , 2020, 15, e0241000.	1.1	37
64	Geology of the d'Entrecasteaux-New Hebrides arc collision zone: results from a deep submersible survey. <i>Tectonophysics</i> , 1992, 212, 213-241.	0.9	36
65	Indentation of the Philippine Sea plate by the Eurasia plate in Taiwan: Details from recent marine seismological experiments. <i>Tectonophysics</i> , 2013, 594, 60-79.	0.9	36
66	Geodynamic setting of Izu-Bonin-Mariana boninites. <i>Geological Society Special Publication</i> , 2003, 219, 163-185.	0.8	34
67	The largest instrumentally recorded earthquake in Taiwan: revised location and magnitude, and tectonic significance of the 1920 event. <i>Geophysical Journal International</i> , 2010, 183, 1119-1133.	1.0	31
68	Strain partitioning in an accretionary wedge, in oblique convergence : analogue modelling. <i>Bulletin - Societe Geologique De France</i> , 2002, 173, 17-24.	0.9	30
69	Lost islands in the northern Lesser Antilles: possible milestones in the Cenozoic dispersal of terrestrial organisms between South-America and the Greater Antilles. <i>Earth-Science Reviews</i> , 2021, 217, 103617.	4.0	30
70	Birth of a major strike-slip fault in SW Japan. <i>Terra Nova</i> , 1999, 11, 203-209.	0.9	29
71	Can subduction initiation at a transform fault be spontaneous?. <i>Solid Earth</i> , 2020, 11, 37-62.	1.2	28
72	Rough Subducting Seafloor Reduces Interseismic Coupling and Mega-Earthquake Occurrence: Insights From Analogue Models. <i>Geophysical Research Letters</i> , 2019, 46, 3124-3132.	1.5	27

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73	Genetic Relations Between the Aves Ridge and the Grenada Back-Arc Basin, East Caribbean Sea. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB020466.	1.4	27
74	The polyphased tectonic evolution of the Anegada Passage in the northern Lesser Antilles subduction zone. <i>Tectonics</i> , 2017, 36, 945-961.	1.3	25
75	Structural Controls of the Taitung Canyon in the Huatung Basin East of Taiwan. <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 1998, 9, 453.	0.3	25
76	Calyptogena-cemented rocks and concretions from the eastern part of Nankai accretionary prism: Age and geochemistry of uranium. <i>Earth and Planetary Science Letters</i> , 1992, 109, 419-429.	1.8	23
77	Crustal deformation at the southernmost part of the Ryukyu subduction (East Taiwan) as revealed by new marine seismic experiments. <i>Tectonophysics</i> , 2012, 578, 10-30.	0.9	23
78	P-wave velocity structure of the southern Ryukyu margin east of Taiwan: Results from the ACTS wide-angle seismic experiment. <i>Tectonophysics</i> , 2012, 578, 50-62.	0.9	21
79	Deep-sea sedimentation offshore eastern Taiwan: Facies and processes characterization. <i>Marine Geology</i> , 2015, 369, 1-18.	0.9	21
80	The last spreading episode of the West Philippine Basin revisited. <i>Geophysical Research Letters</i> , 1999, 26, 2073-2076.	1.5	18
81	Active subduction and collision in Southeast Asia. <i>Tectonophysics</i> , 2001, 333, 1-7.	0.9	18
82	The Chimei Submarine Canyon and Fan: A Record of Taiwan Arc-Continent Collision on the Rapidly Deforming Overriding Plate. <i>Tectonics</i> , 2020, 39, e2020TC006148.	1.3	18
83	Propagators and ridge jumps in a back-arc basin, the West Philippine Basin. <i>Terra Nova</i> , 2008, 20, 327-332.	0.9	17
84	Paleogene V-shaped Basins and Neogene Subsidence of the Northern Lesser Antilles Forearc. <i>Tectonics</i> , 2021, 40, e2020TC006524.	1.3	17
85	Tectonic regime of the southern Kurile Trench as revealed by multichannel seismic lines. <i>Tectonophysics</i> , 1995, 241, 259-277.	0.9	16
86	Subducting oceanic high causes compressional faulting in southernmost Ryukyu forearc as revealed by hypocentral determinations of earthquakes and reflection/refraction seismic data. <i>Tectonophysics</i> , 2009, 466, 255-267.	0.9	16
87	Tectonic implications of canyon directions over the Northeast Atlantic Continental Margin. <i>Tectonics</i> , 1986, 5, 1125-1143.	1.3	14
88	Improvements of the Maximum Intersection Method for 3D Absolute Earthquake Locations. <i>Bulletin of the Seismological Society of America</i> , 2012, 102, 1764-1785.	1.1	14
89	Strain modes within the forearc, arc and back-arc domains in the Izu (Japan) and Taiwan arc-continent collisional settings. <i>Journal of Asian Earth Sciences</i> , 2014, 86, 1-11.	1.0	14
90	Was the 1999 Chi-Chi Earthquake in Taiwan a "Subduction Earthquake"? <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 2000, 11, 709.	0.3	12

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91	Preliminary Neotectonic Map of Onshore-offshore Taiwan. <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 2001, 12, 339.	0.3	12
92	The Bunce Fault and Strain Partitioning in the Northern Lesser Antilles. <i>Geophysical Research Letters</i> , 2019, 46, 9573-9582.	1.5	10
93	Deep Structure of the Grenada Basin From Wide-Angle Seismic, Bathymetric and Gravity Data. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB020472.	1.4	10
94	First identification of a Cathaysian continental fragment beneath the Gagua Ridge, Philippine Sea, and its tectonic implications. <i>Geology</i> , 2021, 49, 1332-1336.	2.0	10
95	Possible interaction between mantle dynamics and high rates of arc consumption by subduction processes in circum-Pacific area. <i>Geodynamic Series</i> , 1998, , 1-9.	0.1	9
96	A $\sim$ 3000 years-old sequence of extreme events revealed by marine and shore deposits east of Taiwan. <i>Tectonophysics</i> , 2016, 692, 325-341.	0.9	9
97	An alternative interpretation for slip vector residuals of subduction interface earthquakes: a case study in the westernmost Ryukyu slab. <i>Tectonophysics</i> , 2001, 333, 123-134.	0.9	8
98	Historical Reconstruction of Submarine Earthquakes Using $^{210}\text{Pb}$ , $^{137}\text{Cs}$ , and $^{241}\text{Am}$ Turbidite Chronology and Radiocarbon Reservoir Age Estimation off East Taiwan. <i>Radiocarbon</i> , 2016, 58, 25-36.	0.8	7
99	An attempt to reconstruct 2700 years of seismicity using deep-sea turbidites offshore eastern Taiwan. <i>Tectonophysics</i> , 2016, 692, 309-324.	0.9	7
100	Vent activity in a subduction area (Nankai wedge): The foraminiferal test records. <i>Earth and Planetary Science Letters</i> , 1992, 109, 405-417.	1.8	6
101	Subduction Zones Parameters $\hat{t}$ . , 2017, , .		5
102	Shallow gas hydrates off southwest Taiwan and their mechanisms. <i>Marine Geophysical Researches</i> , 2021, 42, 1.	0.5	5
103	Pervasive detachment faults within the slow spreading oceanic crust at the poorly coupled Antilles subduction zone. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	2.6	5
104	Elongated Giant Seabed Polygons and Underlying Polygonal Faults as Indicators of the Creep Deformation of Pliocene to Recent Sediments in the Grenada Basin, Caribbean Sea. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009809.	1.0	5
105	Detailed lithospheric structure of an arc-continent collision beneath Taiwan revealed by joint inversion of seismological and gravity data. <i>Geophysical Journal International</i> , 0, , .	1.0	4
106	Active Continental Margin. , 2014, , 1-6.		2
107	Caribbean Plate Boundaries Control on the Tectonic Duality in the Back-Arc of the Lesser Antilles Subduction Zone During the Eocene. <i>Tectonics</i> , 2021, 40, .	1.3	2
108	Subduction in the Japan Trench : The Kaiko Results. <i>Developments in Geotectonics</i> , 1986, 21, 461-480.	0.3	0

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109	Deformation patterns of an accretionary wedge in the transition zone from subduction to collision offshore southwestern Taiwan. , 2003, , .		0
110	Subduction. Encyclopedia of Earth Sciences Series, 2016, , 793-803.	0.1	0
111	Subduction. , 2014, , 1-16.		0