Serge Lallemand

List of Publications by Year
in descending order

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112 papers	8,691 citations	38742 50 h-index	43889 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. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	2.5	409
2	Plate motions, slab dynamics and back-arc deformation. Physics of the Earth and Planetary Interiors, 2005, 149, 31-51.	1.9	389
3	Tectonic erosion along the Japan and Peru convergent margins. Bulletin of the Geological Society of America, 1990, 102, 704-720.	3.3	339
4	Tectonic segmentation of the North Andean margin: impact of the Carnegie Ridge collision. Earth and Planetary Science Letters, 1999, 168, 255-270.	4.4	325
5	Subduction of the Daiichi Kashima Seamount in the Japan Trench. Tectonophysics, 1989, 160, 231-247.	2.2	315
6	Okinawa trough backarc basin: Early tectonic and magmatic evolution. Journal of Geophysical Research, 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. Journal of Geophysical Research, 1994, 99, 12033-12055.	3.3	282
8	Upper plate deformation associated with seamount subduction. Tectonophysics, 1998, 293, 207-224.	2.2	262
9	Deformation of accretionary wedges in response to seamount subduction: Insights from sandbox experiments. Tectonics, 2000, 19, 182-196.	2.8	247
10	Subduction-triggered magmatic pulses: A new class of plumes?. Earth and Planetary Science Letters, 2010, 299, 54-68.	4.4	211
11	Japan Sea: a pull-apart basin?. Earth and Planetary Science Letters, 1986, 76, 375-389.	4.4	205
12	New insights on 3-D plates interaction near Taiwan from tomography and tectonic implications. Tectonophysics, 2001, 335, 229-253.	2.2	191
13	The giant Ruatoria debris avalanche on the northern Hikurangi margin, New Zealand: Result of oblique seamount subduction. Journal of Geophysical Research, 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. Journal of Geophysical Research, 2002, 107, EPM 1-1-EPM 1-24.	3.3	170
15	Trench migration, net rotation and slabâ€“mantle coupling. Earth and Planetary Science Letters, 2008, 271, 233-240.	4.4	164
16	Cyclical behavior of thrust wedges: Insights from high basal friction sandbox experiments. Geology, 1996, 24, 135.	4.4	161
17	Physical characteristics of subduction interface type seismogenic zones revisited. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	2.5	161
18	Hypocentre determination offshore of eastern Taiwan using the Maximum Intersection method. Geophysical Journal International, 2004, 158, 655-675.	2.4	145

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19	Effects of oceanic ridge subduction on accretionary wedges: Experimental modeling and marine observations. Tectonics, 1992, 11, 1301-1313.	2.8	137
20	Relation between subduction megathrust earthquakes, trench sediment thickness and upper plate strain. Geophysical Research Letters, 2012, 39, .	4.0	135
21	Plate kinematics, slab shape and back-arc stress: A comparison between laboratory models and current subduction zones. Earth and Planetary Science Letters, 2007, 256, 473-483.	4.4	133
22	The dammed Hikurangi Trough: a channelâ€fed trench blocked by subducting seamounts and their wake avalanches (New Zealandâ€“France GeodyNZ Project). Basin Research, 1998, 10, 441-468.	2.7	132
23	Episodic imbricate thrusting and underthrusting: Analog experiments and mechanical analysis applied to the Alaskan Accretionary Wedge. Journal of Geophysical Research, 1998, 103, 10161-10176.	3.3	129
24	Material transfer in accretionary wedges from analysis of a systematic series of analog experiments. Journal of Structural Geology, 1998, 20, 407-416.	2.3	123
25	Coulomb wedge model applied to the subduction of seamounts in the Japan Trench. Geology, 1987, 15, 1065.	4.4	119
26	Evidence for Early Cretaceous oceanic crust trapped in the Philippine Sea Plate. Earth and Planetary Science Letters, 2000, 179, 503-516.	4.4	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. Marine Geophysical Researches, 1996, 18, 357-381.	1.2	116
28	Reconciling strong slab pull and weak plate bending: The plate motion constraint on the strength of mantle slabs. Earth and Planetary Science Letters, 2008, 272, 412-421.	4.4	110
29	Subduction dynamics as revealed by trench migration. Tectonics, 2008, 27, .	2.8	108
30	Strain partitioning and interplate friction in oblique subduction zones: Constraints provided by experimental modeling. Journal of Geophysical Research, 2000, 105, 5567-5581.	3.3	103
31	Digital Elevation Model Offshore Taiwan and Its Tectonic Implications. Terrestrial, Atmospheric and Oceanic Sciences, 1998, 9, 705.	0.6	101
32	Predicting trench and plate motion from the dynamics of a strong slab. Earth and Planetary Science Letters, 2007, 257, 29-36.	4.4	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. Tectonics, 1999, 18, 231-247.	2.8	88
34	The Japan Trench and its juncture with the Kuril Trench: cruise results of the Kaiko project, Leg 3. Earth and Planetary Science Letters, 1987, 83, 267-284.	4.4	83
35	New Gravity and Magnetic Anomaly Maps in the Taiwan-Luzon Region and Their Preliminary Interpretation. Terrestrial, Atmospheric and Oceanic Sciences, 1998, 9, 509.	0.6	83
36	Philippine Sea Plate inception, evolution, and consumption with special emphasis on the early stages of Izu-Bonin-Mariana subduction. Progress in Earth and Planetary Science, 2016, 3, .	3.0	80

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37	Deep scientific dives in the Japan and Kuril Trenches. Earth and Planetary Science Letters, 1987, 83, 313-328.	4.4	77
38	Fluid venting activity within the eastern Nankai trough accretionary wedge: A summary of the 1989 Kaiko-Nankai results. Earth and Planetary Science Letters, 1992, 109, 303-318.	4.4	77
39	Mechanical decoupling and basal duplex formation observed in sandbox experiments with application to the Western Mediterranean Ridge accretionary complex. Marine Geology, 2002, 186, 29-42.	2.1	75
40	Machine Learning Can Predict the Timing and Size of Analog Earthquakes. Geophysical Research Letters, 2019, 46, 1303-1311.	4.0	65
41	Normal faulting of the Daiichi-Kashima Seamount in the Japan Trench revealed by the Kaiko I cruise, Leg 3. Earth and Planetary Science Letters, 1987, 83, 257-266.	4.4	64
42	On the role of slab pull in the Cenozoic motion of the Pacific plate. Geophysical Research Letters, 2012, 39, .	4.0	62
43	Title is missing!. Marine Geophysical Researches, 1998, 20, 383-402.	1.2	61
44	Genetic relations between the central and southern Philippine Trench and the Sangihe Trench. Journal of Geophysical Research, 1998, 103, 933-950.	3.3	61
45	A tear fault boundary between the Taiwan orogen and the Ryukyu subduction zone. Tectonophysics, 1997, 274, 171-190.	2.2	56
46	Title is missing!. Marine Geophysical Researches, 1998, 20, 403-423.	1.2	56
47	Deformation Patterns of an Accretionary Wedge in the Transition Zone from Subduction to Collision Offshore Southwestern Taiwan. Marine Geophysical Researches, 2004, 25, 123-137.	1.2	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. New Zealand Journal of Geology, and Geophysics, 2004, 47, 415-429.	1.8	54
49	Dynamics of the Ryukyu/Izu-Bonin-Marianas double subduction system. Tectonophysics, 2018, 746, 229-238.	2.2	54
50	Backâ€arc strain in subduction zones: Statistical observations versus numerical modeling. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	52
51	Subduction initiation from the earliest stages to self-sustained subduction: Insights from the analysis of 70 Cenozoic sites. Earth-Science Reviews, 2021, 221, 103779.	9.1	52
52	High rates of arc consumption by subduction processes: Some consequences. Geology, 1995, 23, 551.	4.4	51
53	Sediment accretion against a buttress beneath the Peruvian continental margin at 12Â° S as simulated with sandbox modeling. Geologische Rundschau: Zeitschrift Fur Allgemeine Geologie, 1994, 83, 822-831.	1.3	50
54	Structural insight into the south Ryukyu margin: effects of the subducting Gagua Ridge. Tectonophysics, 1998, 288, 237-250.	2.2	48

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55	Constraints on backstop geometry of the southwest Ryukyu subduction based on reflection seismic data. Tectonophysics, 2001, 333, 135-158.	2.2	46
56	Fluid venting along Japanese trenches: tectonic context and thermal modeling. Tectonophysics, 1989, 160, 277-291.	2.2	44
57	How Subduction Interface Roughness Influences the Occurrence of Large Interplate Earthquakes. Geochemistry, Geophysics, Geosystems, 2018, 19, 2342-2370.	2.5	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. Earth and Planetary Science Letters, 1992, 109, 333-346.	4.4	42
59	Control of seafloor aging on the migration of the Izuâ€“Boninâ€“Mariana trench. Earth and Planetary Science Letters, 2009, 288, 386-398.	4.4	41
60	Roughness Characteristics of Oceanic Seafloor Prior to Subduction in Relation to the Seismogenic Potential of Subduction Zones. Geochemistry, Geophysics, Geosystems, 2018, 19, 2121-2146.	2.5	41
61	Reconstruction of subduction zone paleogeometries and quantification of upper plate material losses caused by tectonic erosion. Journal of Geophysical Research, 1992, 97, 217-239.	3.3	40
62	Control of asperities size and spacing on seismic behavior of subduction megathrusts. Geophysical Research Letters, 2017, 44, 8227-8235.	4.0	37
63	Eocene intra-plate shortening responsible for the rise of a faunal pathway in the northeastern Caribbean realm. PLoS ONE, 2020, 15, e0241000.	2.5	37
64	Geology of the d'Entrecasteaux-New Hebrides arc collision zone: results from a deep submersible survey. Tectonophysics, 1992, 212, 213-241.	2.2	36
65	Indentation of the Philippine Sea plate by the Eurasia plate in Taiwan: Details from recent marine seismological experiments. Tectonophysics, 2013, 594, 60-79.	2.2	36
66	Geodynamic setting of Izu-Bonin-Mariana boninites. Geological Society Special Publication, 2003, 219, 163-185.	1.3	34
67	The largest instrumentally recorded earthquake in Taiwan: revised location and magnitude, and tectonic significance of the 1920 event. Geophysical Journal International, 2010, 183, 1119-1133.	2.4	31
68	Strain partitioning in an accretionary wedge, in oblique convergence : analogue modelling. Bulletin - Societie Geologique De France, 2002, 173, 17-24.	2.2	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. Earth-Science Reviews, 2021, 217, 103617.	9.1	30
70	Birth of a major strike-slip fault in SW Japan. Terra Nova, 1999, 11, 203-209.	2.1	29
71	Can subduction initiation at a transform fault be spontaneous?. Solid Earth, 2020, 11, 37-62.	2.8	28
72	Rough Subducting Seafloor Reduces Interseismic Coupling and Megaâ€Earthquake Occurrence: Insights From Analogue Models. Geophysical Research Letters, 2019, 46, 3124-3132.	4.0	27

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73	Genetic Relations Between the Aves Ridge and the Grenada Backâ€Arc Basin, East Caribbean Sea. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020466.	3.4	27
74	The polyphased tectonic evolution of the Anegada Passage in the northern Lesser Antilles subduction zone. Tectonics, 2017, 36, 945-961.	2.8	25
75	Structural Controls of the Taitung Canyon in the Huatung Basin East of Taiwan. Terrestrial, Atmospheric and Oceanic Sciences, 1998, 9, 453.	0.6	25
76	Calyptogena-cemented rocks and concretions from the eastern part of Nankai accretionary prism: Age and geochemistry of uranium. Earth and Planetary Science Letters, 1992, 109, 419-429.	4.4	23
77	Crustal deformation at the southernmost part of the Ryukyu subduction (East Taiwan) as revealed by new marine seismic experiments. Tectonophysics, 2012, 578, 10-30.	2.2	23
78	P-wave velocity structure of the southern Ryukyu margin east of Taiwan: Results from the ACTS wide-angle seismic experiment. Tectonophysics, 2012, 578, 50-62.	2.2	21
79	Deep-sea sedimentation offshore eastern Taiwan: Facies and processes characterization. Marine Geology, 2015, 369, 1-18.	2.1	21
80	The last spreading episode of the West Philippine Basin revisited. Geophysical Research Letters, 1999, 26, 2073-2076.	4.0	18
81	Active subduction and collision in Southeast Asia. Tectonophysics, 2001, 333, 1-7.	2.2	18
82	The Chimei Submarine Canyon and Fan: A Record of Taiwan Arcâ€Continent Collision on the Rapidly Deforming Overriding Plate. Tectonics, 2020, 39, e2020TC006148.	2.8	18
83	Propagators and ridge jumps in a backâ€arc basin, the West Philippine Basin. Terra Nova, 2008, 20, 327-332.	2.1	17
84	Paleogene Vâ€Shaped Basins and Neogene Subsidence of the Northern Lesser Antilles Forearc. Tectonics, 2021, 40, e2020TC006524.	2.8	17
85	Tectonic regime of the southern Kurile Trench as revealed by multichannel seismic lines. Tectonophysics, 1995, 241, 259-277.	2.2	16
86	Subducting oceanic high causes compressional faulting in southernmost Ryukyu forearc as revealed by hypocentral determinations of earthquakes and reflection/refraction seismic data. Tectonophysics, 2009, 466, 255-267.	2.2	16
87	Tectonic implications of canyon directions over the Northeast Atlantic Continental Margin. Tectonics, 1986, 5, 1125-1143.	2.8	14
88	Improvements of the Maximum Intersection Method for 3D Absolute Earthquake Locations. Bulletin of the Seismological Society of America, 2012, 102, 1764-1785.	2.3	14
89	Strain modes within the forearc, arc and back-arc domains in the Izu (Japan) and Taiwan arc-continent collisional settings. Journal of Asian Earth Sciences, 2014, 86, 1-11.	2.3	14
90	Was the 1999 Chi-Chi Earthquake in Taiwan a ""Subduction Earthquake""?. Terrestrial, Atmospheric and Oceanic Sciences, 2000, 11, 709.	0.6	12

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91	Preliminary Neotectonic Map of Onshore-offshore Taiwan. Terrestrial, Atmospheric and Oceanic Sciences, 2001, 12, 339.	0.6	12
92	The Bunce Fault and Strain Partitioning in the Northern Lesser Antilles. Geophysical Research Letters, 2019, 46, 9573-9582.	4.0	10
93	Deep Structure of the Grenada Basin From Wideâ€Angle Seismic, Bathymetric and Gravity Data. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020472.	3.4	10
94	First identification of a Cathaysian continental fragment beneath the Gagua Ridge, Philippine Sea, and its tectonic implications. Geology, 2021, 49, 1332-1336.	4.4	10
95	Possible interaction between mantle dynamics and high rates of arc consumption by subduction processes in circum-Pacific area. Geodynamic Series, 1998, , 1-9.	0.1	9
96	A â¼ 3000 years-old sequence of extreme events revealed by marine and shore deposits east of Taiwan. Tectonophysics, 2016, 692, 325-341.	2.2	9
97	An alternative interpretation for slip vector residuals of subduction interface earthquakes: a case study in the westernmost Ryukyu slab. Tectonophysics, 2001, 333, 123-134.	2.2	8
98	Historical Reconstruction of Submarine Earthquakes Using²¹⁰Pb,¹³⁷Cs, and²⁴¹Am Turbidite Chronology and Radiocarbon Reservoir Age Estimation off East Taiwan. Radiocarbon, 2016, 58, 25-36.	1.8	7
99	An attempt to reconstruct 2700 years of seismicity using deep-sea turbidites offshore eastern Taiwan. Tectonophysics, 2016, 692, 309-324.	2.2	7
100	Vent activity in a subduction area (Nankai wedge): The foraminiferal test records. Earth and Planetary Science Letters, 1992, 109, 405-417.	4.4	6
101	Subduction Zones Parameters â˜†. , 2017, , .		5
102	Shallow gas hydrates off southwest Taiwan and their mechanisms. Marine Geophysical Researches, 2021, 42, 1.	1.2	5
103	Pervasive detachment faults within the slow spreading oceanic crust at the poorly coupled Antilles subduction zone. Communications Earth & Environment, 2021, 2, .	6.8	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. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009809.	2.5	5
105	Detailed lithospheric structure of an arc-continent collision beneath Taiwan revealed by joint inversion of seismological and gravity data. Geophysical Journal International, 0, , .	2.4	4
106	Active Continental Margin. , 2014, , 1-6.		2
107	Caribbean Plate Boundaries Control on the Tectonic Duality in the Backâ€Arc of the Lesser Antilles Subduction Zone During the Eocene. Tectonics, 2021, 40, .	2.8	2
108	New bathymetric map of the northeast Atlantic Ocean. Deep Sea Research Part B Oceanographic Literature Review, 1985, 32, 745.	0.0	0

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109	Subduction in the Japan Trench : The Kaiko Results. Developments in Geotectonics, 1986, 21, 461-480.	0.3	0
110	Deformation patterns of an accretionary wedge in the transition zone from subduction to collision offshore southwestern Taiwan. , 2003, , .		0
111	Subduction. Encyclopedia of Earth Sciences Series, 2016, , 793-803.	0.1	0
112	Subduction. , 2014, , 1-16.		0