

Glen Mattioli

List of Publications by Year in descending order

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63
papers

3,159
citations

159358

30
h-index

161609

54
g-index

63
all docs

63
docs citations

63
times ranked

2541
citing authors

#	ARTICLE	IF	CITATIONS
1	GPS geodetic constraints on Caribbean-North America Plate Motion. <i>Geophysical Research Letters</i> , 2000, 27, 437-440.	1.5	288
2	Oblique collision in the northeastern Caribbean from GPS measurements and geological observations. <i>Tectonics</i> , 2002, 21, 7-1-7-26.	1.3	184
3	Transpressional rupture of an unmapped fault during the 2010 Haiti earthquake. <i>Nature Geoscience</i> , 2010, 3, 794-799.	5.4	176
4	Interseismic Plate coupling and strain partitioning in the Northeastern Caribbean. <i>Geophysical Journal International</i> , 2008, 174, 889-903.	1.0	164
5	GPS estimate of relative motion between the Caribbean and South American plates, and geologic implications for Trinidad and Venezuela. <i>Geology</i> , 2001, 29, 75.	2.0	158
6	Forearc motion and Cocos Ridge collision in Central America. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	1.0	155
7	Magnetite activities across the MgAl ₂ O ₄ -Fe ₃ O ₄ spinel join, with application to thermobarometric estimates of upper mantle oxygen fugacity. <i>Contributions To Mineralogy and Petrology</i> , 1988, 98, 148-162.	1.2	121
8	Neotectonics of Puerto Rico and the Virgin Islands, northeastern Caribbean, from GPS geodesy. <i>Tectonics</i> , 2000, 19, 1021-1037.	1.3	104
9	Lithosphere-ionosphere coupling after the 2003 explosive eruption of the Soufriere Hills Volcano, Montserrat. <i>Geophysical Journal International</i> , 2009, 179, 1537-1546.	1.0	94
10	Global Positioning System detection and energy estimation of the ionospheric wave caused by the 13 July 2003 explosion of the Soufriere Hills Volcano, Montserrat. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	93
11	Strain partitioning and fault slip rates in the northeastern Caribbean from GPS measurements. <i>Geophysical Research Letters</i> , 2002, 29, 3-1-3-4.	1.5	91
12	Implications of Magma Transfer Between Multiple Reservoirs on Eruption Cycling. <i>Science</i> , 2008, 322, 246-248.	6.0	87
13	Unprecedented pressure increase in deep magma reservoir triggered by lava-dome collapse. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	84
14	Upper mantle oxygen fugacity recorded by spinel lherzolites. <i>Nature</i> , 1986, 322, 626-628.	13.7	82
15	Upper Mantle Oxygen Fugacity and Its Relationship to Metasomatism. <i>Journal of Geology</i> , 1989, 97, 521-536.	0.7	72
16	GPS measurement of surface deformation around Soufriere Hills Volcano, Montserrat from October 1995 to July 1996. <i>Geophysical Research Letters</i> , 1998, 25, 3417-3420.	1.5	58
17	GPS-derived coupling estimates for the Central America subduction zone and volcanic arc faults: El Salvador, Honduras and Nicaragua. <i>Geophysical Journal International</i> , 2009, 179, 1279-1291.	1.0	56
18	Surface creep on the North Anatolian Fault at Ismetpasa, Turkey, 1944-2016. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 7409-7431.	1.4	55

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19	Kinematics of the Nicaraguan forearc from GPS geodesy. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	50
20	Forearc motion and deformation between El Salvador and Nicaragua: GPS, seismic, structural, and paleomagnetic observations. <i>Lithosphere</i> , 2011, 3, 3-21.	0.6	50
21	Ground deformation at Soufrière Hills Volcano, Montserrat during 1998–2000 measured by radar interferometry and GPS. <i>Journal of Volcanology and Geothermal Research</i> , 2006, 152, 157-173.	0.8	46
22	Effect of mechanical heterogeneity in arc crust on volcano deformation with application to Soufrière Hills Volcano, Montserrat, West Indies. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	46
23	Magma–sponge hypothesis and stratovolcanoes: Case for a compressible reservoir and quasi-steady deep influx at Soufrière Hills Volcano, Montserrat. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	45
24	Tectonic strain in plate interiors?. <i>Nature</i> , 2005, 438, E9-E10.	13.7	43
25	Three-dimensional seismic velocity tomography of Montserrat from the SEA–CALIPSO offshore/onshore experiment. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	43
26	Seismogeodesy Using GPS and Low-Cost MEMS Accelerometers: Perspectives for Earthquake Early Warning and Rapid Response. <i>Bulletin of the Seismological Society of America</i> , 2016, 106, 2469-2489.	1.1	40
27	Tectonic relationships between forearc-basin strata and the accretionary complex at Bath, Barbados. <i>Bulletin of the Geological Society of America</i> , 1985, 96, 861.	1.6	37
28	Vulcanian explosion at Soufrière Hills Volcano, Montserrat on March 2004 as revealed by strain data. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	37
29	Unique and remarkable dilatometer measurements of pyroclastic flow-generated tsunamis. <i>Geology</i> , 2007, 35, 25.	2.0	36
30	Influence of extrusion rate and magma rheology on the growth of lava domes: Insights from particle-dynamics modeling. <i>Journal of Volcanology and Geothermal Research</i> , 2014, 285, 100-117.	0.8	35
31	TLALOCNet: A Continuous GPS–Met Backbone in Mexico for Seismotectonic and Atmospheric Research. <i>Seismological Research Letters</i> , 2018, 89, 373-381.	0.8	31
32	Long term surface deformation of Soufrière Hills Volcano, Montserrat from GPS geodesy: Inferences from simple elastic inverse models. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	29
33	Focused study of interweaving hazards across the Caribbean. <i>Eos</i> , 2012, 93, 89-90.	0.1	28
34	Dual reservoir structure at Soufrière Hills Volcano inferred from continuous GPS observations and heterogeneous elastic modeling. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	27
35	Prototype PBO instrumentation of CALIPSO project captures world-record lava dome collapse on Montserrat Volcano. <i>Eos</i> , 2004, 85, 317.	0.1	26
36	Chapter 11 Volcano geodesy at the Soufrière Hills Volcano, Montserrat: a review. <i>Geological Society Memoir</i> , 2014, 39, 195-217.	0.9	26

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37	Prehistoric Stratigraphy of the Soufri�re Hills�South Soufri�re Hills Volcanic Complex, Montserrat, West Indies. <i>Journal of Geology</i> , 2007, 115, 115-127.	0.7	24
38	Present motion and deformation of the Caribbean plate: Constraints from new GPS geodetic measurements from Honduras and Nicaragua. , 2007, , .		23
39	GPS results from Puerto Rico and the Virgin Islands: Constraints on tectonic setting and rates of active faulting. , 2005, , .		23
40	Explosion dynamics from strainmeter and microbarometer observations, Soufri�re Hills Volcano, Montserrat: 2008�2009. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	22
41	Investigation of biological, chemical and physical processes on and in planetary surfaces by laboratory simulation. <i>Planetary and Space Science</i> , 2002, 50, 821-828.	0.9	20
42	Regional Global Navigation Satellite System Networks for Crustal Deformation Monitoring. <i>Seismological Research Letters</i> , 2019, 91, 552-572.	0.8	20
43	CARIB18: A Stable Geodetic Reference Frame for Geological Hazard Monitoring in the Caribbean Region. <i>Remote Sensing</i> , 2019, 11, 680.	1.8	19
44	Evaluation of Earthquake Magnitude Estimation and Event Detection Thresholds for Real-Time GNSS Networks: Examples from Recent Events Captured by the Network of the Americas. <i>Seismological Research Letters</i> , 2020, 91, 1628-1645.	0.8	19
45	Unique strainmeter observations of Vulcanian explosions, Soufri�re Hills Volcano, Montserrat, July 2003. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	17
46	Experimental determination of the chromium-aluminum mixing parameter in garnet. <i>Geochimica Et Cosmochimica Acta</i> , 1984, 48, 1367-1371.	1.6	16
47	Title is missing!. <i>Natural Hazards</i> , 2001, 23, 65-86.	1.6	16
48	Active Source Seismic Experiment Peers Under Soufri�re Hills Volcano. <i>Eos</i> , 2010, 91, 245-247.	0.1	16
49	The 2012 August 27 <i>M</i> _w 7.3 El Salvador earthquake: expression of weak coupling on the Middle America subduction zone. <i>Geophysical Journal International</i> , 2015, 202, 1677-1689.	1.0	16
50	Chapter 7.2�f Mount Erebus. <i>Geological Society Memoir</i> , 2021, 55, 695-739.	0.9	15
51	Magmatic-metering controls the stopping and restarting of eruptions. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	14
52	The GAGE Data and Field Response to the 2019 Ridgecrest Earthquake Sequence. <i>Seismological Research Letters</i> , 2020, 91, 2075-2086.	0.8	14
53	Geodetic imaging of thermal deformation in geothermal reservoirs - production, depletion and fault reactivation. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 338, 79-91.	0.8	12
54	Influence of conduit flow mechanics on magma rheology and the growth style of lava domes. <i>Geophysical Journal International</i> , 2018, 213, 1768-1784.	1.0	12

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55	Distal ash hurricane (pyroclastic density current) deposits from a ca. 2000 yr B.P. Plinian-style eruption of Mount Pelée, Martinique: Distribution, grain-size characteristics, and implications for future hazard. <i>Bulletin of the Geological Society of America</i> , 2016, 128, 777-791.	1.6	10
56	The Volcanic Geology of the Mid-Arc Island of Dominica, Lesser Antilles—The Surface Expression of an Island-Arc Batholith. , 2013, , .		9
57	Morphologic variation of an evolving dome controlled by the extrusion of finite yield strength magma. <i>Journal of Volcanology and Geothermal Research</i> , 2019, 370, 51-64.	0.8	7
58	Chapter 12 Geodetic imaging of magma migration at Soufrière Hills Volcano 1995 to 2008. <i>Geological Society Memoir</i> , 2014, 39, 219-227.	0.9	5
59	Chapter 15 The SEA-CALIPSO volcano imaging experiment at Montserrat: plans, campaigns at sea and on land, scientific results, and lessons learned. <i>Geological Society Memoir</i> , 2014, 39, 253-289.	0.9	5
60	A desktop image processing and photogrammetric method for rapid volcanic hazard mapping: application to air-photo interpretation of Mount Pelée, Martinique. <i>Bulletin of Volcanology</i> , 1996, 58, 401-410.	1.1	3
61	Slicer Laser Altimetry In The Eastern Caribbean. <i>Surveys in Geophysics</i> , 2001, 22, 561-579.	2.1	2
62	Partnering with Cuba: Weather extremes. <i>Science</i> , 2014, 345, 278-278.	6.0	2
63	Northeastern Caribbean topography gets a digital upgrade from laser altimetry. <i>Eos</i> , 1999, 80, 511-511.	0.1	1