

Diego Melgar

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

3,462
citations

159525

30
h-index

149623

56
g-index

87
all docs

87
docs citations

87
times ranked

2265
citing authors

#	ARTICLE	IF	CITATIONS
1	Slip pulse and resonance of the Kathmandu basin during the 2015 Gorkha earthquake, Nepal. <i>Science</i> , 2015, 349, 1091-1095.	6.0	287
2	Earthquake Early Warning: Advances, Scientific Challenges, and Societal Needs. <i>Annual Review of Earth and Planetary Sciences</i> , 2019, 47, 361-388.	4.6	206
3	Real-Time Strong-Motion Broadband Displacements from Collocated GPS and Accelerometers. <i>Bulletin of the Seismological Society of America</i> , 2011, 101, 2904-2925.	1.1	203
4	Line-of-sight displacement from ALOS-2 interferometry: <i>M_w</i> 7.8 Gorkha Earthquake and <i>M_w</i> 7.3 aftershock. <i>Geophysical Research Letters</i> , 2015, 42, 6655-6661.	1.5	174
5	Physical applications of GPS geodesy: a review. <i>Reports on Progress in Physics</i> , 2016, 79, 106801.	8.1	161
6	Slip segmentation and slow rupture to the trench during the 2015, <i>M_w</i> 8.3 Illapel, Chile earthquake. <i>Geophysical Research Letters</i> , 2016, 43, 961-966.	1.5	141
7	A new seismogeodetic approach applied to GPS and accelerometer observations of the 2012 Brawley seismic swarm: Implications for earthquake early warning. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 2124-2142.	1.0	124
8	Earthquake magnitude calculation without saturation from the scaling of peak ground displacement. <i>Geophysical Research Letters</i> , 2015, 42, 5197-5205.	1.5	118
9	Real-time inversion of GPS data for finite fault modeling and rapid hazard assessment. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	114
10	Real-time centroid moment tensor determination for large earthquakes from local and regional displacement records. <i>Geophysical Journal International</i> , 2012, 188, 703-718.	1.0	111
11	Earthquake magnitude scaling using seismogeodetic data. <i>Geophysical Research Letters</i> , 2013, 40, 6089-6094.	1.5	92
12	Kinematic earthquake source inversion and tsunami runup prediction with regional geophysical data. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 3324-3349.	1.4	88
13	On robust and reliable automated baseline corrections for strong motion seismology. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 1177-1187.	1.4	84
14	Complex Rupture of an Immature Fault Zone: A Simultaneous Kinematic Model of the 2019 Ridgecrest, CA Earthquakes. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086382.	1.5	79
15	Near-field tsunami models with rapid earthquake source inversions from land- and ocean-based observations: The potential for forecast and warning. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 5939-5955.	1.4	73
16	Local tsunami warnings: Perspectives from recent large events. <i>Geophysical Research Letters</i> , 2016, 43, 1109-1117.	1.5	69
17	Kinematic rupture scenarios and synthetic displacement data: An example application to the Cascadia subduction zone. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 6658-6674.	1.4	66
18	Rapid modeling of the 2011 Mw 9.0 Tohoku-oki earthquake with seismogeodesy. <i>Geophysical Research Letters</i> , 2013, 40, 2963-2968.	1.5	64

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19	Seismogeodesy of the 2014 <i>M_w</i> 6.1 Napa earthquake, California: Rapid response and modeling of fast rupture on a dipping strike-slip fault. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 5013-5033.	1.4	56
20	Imaging the Moho and Subducted Oceanic Crust at the Isthmus of Tehuantepec, Mexico, from Receiver Functions. <i>Pure and Applied Geophysics</i> , 2011, 168, 1449-1460.	0.8	55
21	A Global Database of Strong-Motion Displacement GNSS Recordings and an Example Application to PGD Scaling. <i>Seismological Research Letters</i> , 2019, 90, 271-279.	0.8	55
22	The value of real-time GNSS to earthquake early warning. <i>Geophysical Research Letters</i> , 2017, 44, 8311-8319.	1.5	54
23	Systematic Observations of the Slip Pulse Properties of Large Earthquake Ruptures. <i>Geophysical Research Letters</i> , 2017, 44, 9691-9698.	1.5	51
24	Source Mechanism and Rupture Process of the 24 January 2020 <i>M_w</i> 6.7 DoÅnyol-Sivrice Earthquake obtained from Seismological Waveform Analysis and Space Geodetic Observations on the East Anatolian Fault Zone (Turkey). <i>Tectonophysics</i> , 2021, 804, 228745.	0.9	45
25	Rupture kinematics of 2020 January 24 <i>M_w</i> 6.7 DoÅnyol-Sivrice, Turkey earthquake on the East Anatolian Fault Zone imaged by space geodesy. <i>Geophysical Journal International</i> , 2020, 223, 862-874.	1.0	44
26	Deep embrittlement and complete rupture of the lithosphere during the <i>M_w</i> 8.2 Tehuantepec earthquake. <i>Nature Geoscience</i> , 2018, 11, 955-960.	5.4	42
27	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
28	Bend Faulting at the Edge of a Flat Slab: The 2017 <i>M_w</i> 7.1 Puebla-Morelos, Mexico Earthquake. <i>Geophysical Research Letters</i> , 2018, 45, 2633-2641.	1.5	39
29	Characterizing large earthquakes before rupture is complete. <i>Science Advances</i> , 2019, 5, eaav2032.	4.7	37
30	Real-Time High-Rate GNSS Displacements: Performance Demonstration during the 2019 Ridgecrest, California, Earthquakes. <i>Seismological Research Letters</i> , 2020, 91, 1943-1951.	0.8	36
31	Slipping the Shumagin Gap: A Kinematic Coseismic and Early Afterslip Model of the <i>M_w</i> 7.8 Simeonof Island, Alaska, Earthquake. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL090308.	1.5	35
32	Development of a Geodetic Component for the U.S. West Coast Earthquake Early Warning System. <i>Seismological Research Letters</i> , 2018, 89, 2322-2336.	0.8	33
33	The 8 September 2017 Tsunami Triggered by the <i>M_w</i> 8.2 Intraplate Earthquake, Chiapas, Mexico. <i>Pure and Applied Geophysics</i> , 2018, 175, 25-34.	0.8	32
34	Quantifying the Value of Real-Time Geodetic Constraints for Earthquake Early Warning Using a Global Seismic and Geodetic Data Set. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3819-3837.	1.4	31
35	The Correlation Lengths and Hypocentral Positions of Great Earthquakes. <i>Bulletin of the Seismological Society of America</i> , 2019, 109, 2582-2593.	1.1	29
36	<i>W</i> phase source inversion using high-rate regional GPS data for large earthquakes. <i>Geophysical Research Letters</i> , 2016, 43, 3178-3185.	1.5	27

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37	Recovering coseismic point ground tilts from collocated high-rate GPS and accelerometers. <i>Geophysical Research Letters</i> , 2013, 40, 5095-5100.	1.5	26
38	Source characteristics of the 2015 M_w 6.5 Lefkada, Greece, strike-slip earthquake. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 2260-2273.	1.4	25
39	Hypothetical Real-time GNSS Modeling of the 2016 M_w 7.8 Kaikoura Earthquake: Perspectives from Ground Motion and Tsunami Inundation Prediction. <i>Bulletin of the Seismological Society of America</i> , 2018, 108, 1736-1745.	1.1	25
40	The first since 1960: A large event in the Valdivia segment of the Chilean Subduction Zone, the 2016 M_w 7.6 Melinka earthquake. <i>Earth and Planetary Science Letters</i> , 2017, 474, 68-75.	1.8	23
41	A hybrid deterministic and stochastic approach for tsunami hazard assessment in Iquique, Chile. <i>Natural Hazards</i> , 2020, 100, 231-254.	1.6	23
42	Geodetic Observations of Weak Determinism in Rupture Evolution of Large Earthquakes. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 9950-9962.	1.4	22
43	The Effect of Earthquake Kinematics on Tsunami Propagation. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 11639-11650.	1.4	22
44	Early Warning for Great Earthquakes From Characterization of Crustal Deformation Patterns With Deep Learning. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB022703.	1.4	20
45	Tsunami Scenarios Based on Interseismic Models Along the Nankai Trough, Japan, From Seafloor and Onshore Geodesy. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 2448-2461.	1.4	18
46	Sand deposits reveal great earthquakes and tsunamis at Mexican Pacific Coast. <i>Scientific Reports</i> , 2020, 10, 11452.	1.6	18
47	A Study of the 2015 M_w 8.3 Illapel Earthquake and Tsunami: Numerical and Analytical Approaches. <i>Pure and Applied Geophysics</i> , 2016, 173, 1847-1858.	0.8	17
48	Ground Motions from the 7 and 19 September 2017 Tehuantepec and Puebla-Morelos, Mexico, Earthquakes. <i>Bulletin of the Seismological Society of America</i> , 0, , .	1.1	17
49	Noise Characteristics of Operational Real-time High-rate GNSS Positions in a Large Aperture Network. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB019197.	1.4	17
50	Long-lived Tsunami Edge Waves and Shelf Resonance From the M_w 8.2 Tehuantepec Earthquake. <i>Geophysical Research Letters</i> , 2018, 45, 12,414.	1.5	16
51	Weak Near-field Behavior of a Tsunami Earthquake: Toward Real-time Identification for Local Warning. <i>Geophysical Research Letters</i> , 2019, 46, 9519-9528.	1.5	14
52	Was the January 26th, 1700 Cascadia Earthquake Part of a Rupture Sequence?. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB021822.	1.4	12
53	Seismogeodetic P-wave Amplitude: No Evidence for Strong Determinism. <i>Geophysical Research Letters</i> , 2019, 46, 11118-11126.	1.5	11
54	A Source Clustering Approach for Efficient Inundation Modeling and Regional Scale Probabilistic Tsunami Hazard Assessment. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	11

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55	Geodetic Coupling Models as Constraints on Stochastic Earthquake Ruptures: An Example Application to PTHA in Cascadia. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021149.	1.4	11
56	Quick determination of earthquake source parameters from GPS measurements: a study of suitability for Taiwan. <i>Geophysical Journal International</i> , 2019, 219, 1148-1162.	1.0	10
57	Toward Near-Field Tsunami Forecasting Along the Cascadia Subduction Zone Using Rapid GNSS Source Models. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB019636.	1.4	10
58	A Ground-Motion Model for GNSS Peak Ground Displacement. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2393-2407.	1.1	10
59	Generation and Validation of Broadband Synthetic P Waves in Semistochastic Models of Large Earthquakes. <i>Bulletin of the Seismological Society of America</i> , 2020, 110, 1982-1995.	1.1	9
60	Energetic Rupture and Tsunamiogenesis during the 2020 Mw 7.4 La Crucecita, Mexico Earthquake. <i>Seismological Research Letters</i> , 2021, 92, 140-150.	0.8	8
61	The 19 September 2017 Mw 7.1 Puebla-Morelos Earthquake: Spectral Ratios Confirm Mexico City Zoning. <i>Bulletin of the Seismological Society of America</i> , 0, , .	1.1	7
62	Overlapping regions of coseismic and transient slow slip on the Hawaiian décollement. <i>Earth and Planetary Science Letters</i> , 2020, 544, 116353.	1.8	7
63	Deep Coseismic Slip in the Cascadia Megathrust Can Be Consistent With Coastal Subsidence. <i>Geophysical Research Letters</i> , 2022, 49, e2021GL097404.	1.5	7
64	Mesopause Airglow Disturbances Driven by Nonlinear Infrasonic Acoustic Waves Generated by Large Earthquakes. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027628.	0.8	6
65	The Effect of Fore-Arc Deformation on Shallow Earthquake Rupture Behavior in the Cascadia Subduction Zone. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093941.	1.5	6
66	Complex Rupture of the 2015 Mw 8.3 Illapel Earthquake and Prehistoric Events in the Central Chile Tsunami Gap. <i>Seismological Research Letters</i> , 2022, 93, 1479-1496.	0.8	4
67	Magnitude Calculation without Saturation from Strong-Motion Waveforms. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 50-60.	1.1	3
68	Developing a Warning System for Inbound Tsunamis from the Cascadia Subduction Zone. , 2018, , .		2
69	Numerical Simulation of Tsunami Coastal Amplitudes in the Pacific Coast of Mexico Based on Non-Uniform k^{-2} Slip Distributions. <i>Pure and Applied Geophysics</i> , 2021, 178, 3291.	0.8	2
70	Regional Probabilistic Tsunami Hazard Analysis for the Mexican Subduction Zone From Stochastic Slip Models. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB020781.	1.4	2
71	A Study of the 2015 Mw 8.3 Illapel Earthquake and Tsunami: Numerical and Analytical Approaches. , 2017, , 255-266.		1