Diego Melgar

List of Publications by Year
in descending order

71 papers	3,462 citations	159585 30 h-index	149698 56 g-index
87 all docs	87 docs citations	87 times ranked	2265 citing authors

#	Article	IF	Citations
1	Deep Coseismic Slip in the Cascadia Megathrust Can Be Consistent With Coastal Subsidence. Geophysical Research Letters, 2022, 49, e2021GL097404.	4.0	7
2	Complex Rupture of the 2015 MwÂ8.3 Illapel Earthquake and Prehistoric Events in the Central Chile Tsunami Gap. Seismological Research Letters, 2022, 93, 1479-1496.	1.9	4
3	Magnitude Calculation without Saturation from Strong-Motion Waveforms. Bulletin of the Seismological Society of America, 2021, 111, 50-60.	2.3	3
4	Energetic Rupture and Tsunamigenesis during the 2020 MwÂ7.4 La Crucecita, Mexico Earthquake. Seismological Research Letters, 2021, 92, 140-150.	1.9	8
5	Source Mechanism and Rupture Process of the 24 January 2020 Mw 6.7 DoÄŸanyolâ€"Sivrice Earthquake obtained from Seismological Waveform Analysis and Space Geodetic Observations on the East Anatolian Fault Zone (Turkey). Tectonophysics, 2021, 804, 228745.	2.2	45
6	Numerical Simulation of Tsunami Coastal Amplitudes in the Pacific Coast of Mexico Based on Non-Uniform $$k^{-2}$$ Slip Distributions. Pure and Applied Geophysics, 2021, 178, 3291.	1.9	2
7	Regional Probabilistic Tsunami Hazard Analysis for the Mexican Subduction Zone From Stochastic Slip Models. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020781.	3.4	2
8	Geodetic Coupling Models as Constraints on Stochastic Earthquake Ruptures: An Example Application to PTHA in Cascadia. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021149.	3.4	11
9	A Ground-Motion Model for GNSS Peak Ground Displacement. Bulletin of the Seismological Society of America, 2021, 111, 2393-2407.	2.3	10
10	Was the January 26th, 1700 Cascadia Earthquake Part of a Rupture Sequence?. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021822.	3.4	12
11	Early Warning for Great Earthquakes From Characterization of Crustal Deformation Patterns With Deep Learning. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022703.	3.4	20
12	The Effect of Foreâ€Arc Deformation on Shallow Earthquake Rupture Behavior in the Cascadia Subduction Zone. Geophysical Research Letters, 2021, 48, e2021GL093941.	4.0	6
13	A hybrid deterministic and stochastic approach for tsunami hazard assessment in Iquique, Chile. Natural Hazards, 2020, 100, 231-254.	3.4	23
14	Real-Time High-Rate GNSS Displacements: Performance Demonstration during the 2019 Ridgecrest, California, Earthquakes. Seismological Research Letters, 2020, 91, 1943-1951.	1.9	36
15	Slipping the Shumagin Gap: A Kinematic Coseismic and Early Afterslip Model of the Mw 7.8 Simeonof Island, Alaska, Earthquake. Geophysical Research Letters, 2020, 47, e2020GL090308.	4.0	35
16	Generation and Validation of Broadband Synthetic P Waves in Semistochastic Models of Large Earthquakes. Bulletin of the Seismological Society of America, 2020, 110, 1982-1995.	2.3	9
17	Rupture kinematics of 2020 January 24 Mw 6.7 DoÄŸanyol-Sivrice, Turkey earthquake on the East Anatolian Fault Zone imaged by space geodesy. Geophysical Journal International, 2020, 223, 862-874.	2.4	44
18	Sand deposits reveal great earthquakes and tsunamis at Mexican Pacific Coast. Scientific Reports, 2020, 10, 11452.	3.3	18

#	Article	IF	Citations
19	A Source Clustering Approach for Efficient Inundation Modeling and Regional Scale Probabilistic Tsunami Hazard Assessment. Frontiers in Earth Science, 2020, 8, .	1.8	11
20	Toward Nearâ€Field Tsunami Forecasting Along the Cascadia Subduction Zone Using Rapid GNSS Source Models. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019636.	3.4	10
21	Overlapping regions of coseismic and transient slow slip on the Hawaiian dÃ©collement. Earth and Planetary Science Letters, 2020, 544, 116353.	4.4	7
22	Mesopause Airglow Disturbances Driven by Nonlinear Infrasonic Acoustic Waves Generated by Large Earthquakes. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027628.	2.4	6
23	Noise Characteristics of Operational Realâ€Time Highâ€Rate GNSS Positions in a Large Aperture Network. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB019197.	3.4	17
24	Complex Rupture of an Immature Fault Zone: A Simultaneous Kinematic Model of the 2019 Ridgecrest, CA Earthquakes. Geophysical Research Letters, 2020, 47, e2019GL086382.	4.0	79
25	Quick determination of earthquake source parameters from GPS measurements: a study of suitability for Taiwan. Geophysical Journal International, 2019, 219, 1148-1162.	2.4	10
26	Weak Nearâ€Field Behavior of a Tsunami Earthquake: Toward Realâ€Time Identification for Local Warning. Geophysical Research Letters, 2019, 46, 9519-9528.	4.0	14
27	The Effect of Earthquake Kinematics on Tsunami Propagation. Journal of Geophysical Research: Solid Earth, 2019, 124, 11639-11650.	3.4	22
28	The Correlation Lengths and Hypocentral Positions of Great Earthquakes. Bulletin of the Seismological Society of America, 2019, 109, 2582-2593.	2.3	29
29	Seismogeodetic Pâ€wave Amplitude: No Evidence for Strong Determinism. Geophysical Research Letters, 2019, 46, 11118-11126.	4.0	11
30	Earthquake Early Warning: Advances, Scientific Challenges, and Societal Needs. Annual Review of Earth and Planetary Sciences, 2019, 47, 361-388.	11.0	206
31	Characterizing large earthquakes before rupture is complete. Science Advances, 2019, 5, eaav2032.	10.3	37
32	A Global Database of Strongâ€Motion Displacement GNSS Recordings and an Example Application to PGD Scaling. Seismological Research Letters, 2019, 90, 271-279.	1.9	55
33	Quantifying the Value of Realâ€Time Geodetic Constraints for Earthquake Early Warning Using a Global Seismic and Geodetic Data Set. Journal of Geophysical Research: Solid Earth, 2019, 124, 3819-3837.	3.4	31
34	Tsunami Scenarios Based on Interseismic Models Along the Nankai Trough, Japan, From Seafloor and Onshore Geodesy. Journal of Geophysical Research: Solid Earth, 2018, 123, 2448-2461.	3.4	18
35	The 8 September 2017 Tsunami Triggered by the Mw 8.2 Intraplate Earthquake, Chiapas, Mexico. Pure and Applied Geophysics, 2018, 175, 25-34.	1.9	32
36	Bend Faulting at the Edge of a Flat Slab: The 2017 <i>M</i>_w7.1 Pueblaâ€Morelos, Mexico Earthquake. Geophysical Research Letters, 2018, 45, 2633-2641.	4.0	39

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37	Development of a Geodetic Component for the U.S. West Coast Earthquake Early Warning System. Seismological Research Letters, 2018, 89, 2322-2336.	1.9	33
38	Developing a Warning System for Inbound Tsunamis from the Cascadia Subduction Zone. , 2018, , .		2
39	Hypothetical Realâ€Time GNSS Modeling of the 2016 MwÂ7.8 KaikÅura Earthquake: Perspectives from Ground Motion and Tsunami Inundation Prediction. Bulletin of the Seismological Society of America, 2018, 108, 1736-1745.	2.3	25
40	Longâ€Lived Tsunami Edge Waves and Shelf Resonance From the M8.2 Tehuantepec Earthquake. Geophysical Research Letters, 2018, 45, 12,414.	4.0	16
41	Geodetic Observations of Weak Determinism in Rupture Evolution of Large Earthquakes. Journal of Geophysical Research: Solid Earth, 2018, 123, 9950-9962.	3.4	22
42	Deep embrittlement and complete rupture of the lithosphere during the Mwâ€‰8.2 Tehuantepec earthquake. Nature Geoscience, 2018, 11, 955-960.	12.9	42
43	Source characteristics of the 2015 <i>M_w</i>6.5 Lefkada, Greece, strikeâ€slip earthquake. Journal of Geophysical Research: Solid Earth, 2017, 122, 2260-2273.	3.4	25
44	Systematic Observations of the Slip Pulse Properties of Large Earthquake Ruptures. Geophysical Research Letters, 2017, 44, 9691-9698.	4.0	51
45	The value of realâ€time GNSS to earthquake early warning. Geophysical Research Letters, 2017, 44, 8311-8319.	4.0	54
46	The first since 1960: A large event in the Valdivia segment of the Chilean Subduction Zone, the 2016 M7.6 Melinka earthquake. Earth and Planetary Science Letters, 2017, 474, 68-75.	4.4	23
47	A Study of the 2015 M w 8.3 Illapel Earthquake and Tsunami: Numerical and Analytical Approaches. , 2017, , 255-266.		1
48	<i>W</i> phase source inversion using highâ€rate regional GPS data for large earthquakes. Geophysical Research Letters, 2016, 43, 3178-3185.	4.0	27
49	Local tsunami warnings: Perspectives from recent large events. Geophysical Research Letters, 2016, 43, 1109-1117.	4.0	69
50	A Study of the 2015 M w 8.3 Illapel Earthquake and Tsunami: Numerical and Analytical Approaches. Pure and Applied Geophysics, 2016, 173, 1847-1858.	1.9	17
51	Kinematic rupture scenarios and synthetic displacement data: An example application to the Cascadia subduction zone. Journal of Geophysical Research: Solid Earth, 2016, 121, 6658-6674.	3.4	66
52	Physical applications of GPS geodesy: a review. Reports on Progress in Physics, 2016, 79, 106801.	20.1	161
53	Seismogeodesy Using GPS and Lowâ€Cost MEMS Accelerometers: Perspectives for Earthquake Early Warning and Rapid Response. Bulletin of the Seismological Society of America, 2016, 106, 2469-2489.	2.3	40
54	Slip segmentation and slow rupture to the trench during the 2015, <i>M_w</i>8.3 Illapel, Chile earthquake. Geophysical Research Letters, 2016, 43, 961-966.	4.0	141

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55	Kinematic earthquake source inversion and tsunami runup prediction with regional geophysical data. Journal of Geophysical Research: Solid Earth, 2015, 120, 3324-3349.	3.4	88
56	Earthquake magnitude calculation without saturation from the scaling of peak ground displacement. Geophysical Research Letters, 2015, 42, 5197-5205.	4.0	118
57	Lineâ€ofâ€sight displacement from ALOSâ€2 interferometry: <i>M_w</i> 7.8 Gorkha Earthquake and <i>M_w</i> 7.3 aftershock. Geophysical Research Letters, 2015, 42, 6655-6661.	4.0	174
58	Seismogeodesy of the 2014 <i>M_w</i>6.1 Napa earthquake, California: Rapid response and modeling of fast rupture on a dipping strikeâ€slip fault. Journal of Geophysical Research: Solid Earth, 2015, 120, 5013-5033.	3.4	56
59	Slip pulse and resonance of the Kathmandu basin during the 2015 Gorkha earthquake, Nepal. Science, 2015, 349, 1091-1095.	12.6	287
60	A new seismogeodetic approach applied to GPS and accelerometer observations of the 2012 Brawley seismic swarm: Implications for earthquake early warning. Geochemistry, Geophysics, Geosystems, 2013, 14, 2124-2142.	2.5	124
61	Nearâ€field tsunami models with rapid earthquake source inversions from landâ€and oceanâ€based observations: The potential for forecast and warning. Journal of Geophysical Research: Solid Earth, 2013, 118, 5939-5955.	3.4	73
62	Recovering coseismic point ground tilts from collocated highâ€rate GPS and accelerometers. Geophysical Research Letters, 2013, 40, 5095-5100.	4.0	26
63	Earthquake magnitude scaling using seismogeodetic data. Geophysical Research Letters, 2013, 40, 6089-6094.	4.0	92
64	Rapid modeling of the 2011 Mw 9.0 Tohoku-oki earthquake with seismogeodesy. Geophysical Research Letters, 2013, 40, 2963-2968.	4.0	64
65	On robust and reliable automated baseline corrections for strong motion seismology. Journal of Geophysical Research: Solid Earth, 2013, 118, 1177-1187.	3.4	84
66	Realâ€time inversion of GPS data for finite fault modeling and rapid hazard assessment. Geophysical Research Letters, 2012, 39, .	4.0	114
67	Real-time centroid moment tensor determination for large earthquakes from local and regional displacement records. Geophysical Journal International, 2012, 188, 703-718.	2.4	111
68	Imaging the Moho and Subducted Oceanic Crust at the Isthmus of Tehuantepec, Mexico, from Receiver Functions. Pure and Applied Geophysics, 2011, 168, 1449-1460.	1.9	55
69	Real-Time Strong-Motion Broadband Displacements from Collocated GPS and Accelerometers. Bulletin of the Seismological Society of America, 2011, 101, 2904-2925.	2.3	203
70	The 19 September 2017 MÂ7.1 Pueblaâ€Morelos Earthquake: Spectral Ratios Confirm Mexico City Zoning. Bulletin of the Seismological Society of America, 0, , .	2.3	7
71	Ground Motions from the 7 and 19 September 2017 Tehuantepec and Pueblaâ€Morelos, Mexico, Earthquakes. Bulletin of the Seismological Society of America, 0, , .	2.3	17