Diego Melgar

List of Publications by Year
in descending order

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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	Slip pulse and resonance of the Kathmandu basin during the 2015 Gorkha earthquake, Nepal. Science, 2015, 349, 1091-1095.	12.6	287
2	Earthquake Early Warning: Advances, Scientific Challenges, and Societal Needs. Annual Review of Earth and Planetary Sciences, 2019, 47, 361-388.	11.0	206
3	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
4	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
5	Physical applications of GPS geodesy: a review. Reports on Progress in Physics, 2016, 79, 106801.	20.1	161
6	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
7	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
8	Earthquake magnitude calculation without saturation from the scaling of peak ground displacement. Geophysical Research Letters, 2015, 42, 5197-5205.	4.0	118
9	Realâ€•time inversion of GPS data for finite fault modeling and rapid hazard assessment. Geophysical Research Letters, 2012, 39, .	4.0	114
10	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
11	Earthquake magnitude scaling using seismogeodetic data. Geophysical Research Letters, 2013, 40, 6089-6094.	4.0	92
12	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
13	On robust and reliable automated baseline corrections for strong motion seismology. Journal of Geophysical Research: Solid Earth, 2013, 118, 1177-1187.	3.4	84
14	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
15	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
16	Local tsunami warnings: Perspectives from recent large events. Geophysical Research Letters, 2016, 43, 1109-1117.	4.0	69
17	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
18	Rapid modeling of the 2011 Mw 9.0 Tohoku-oki earthquake with seismogeodesy. Geophysical Research Letters, 2013, 40, 2963-2968.	4.0	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 strikeâ€slip fault. Journal of Geophysical Research: Solid Earth, 2015, 120, 5013-5033.	3.4	56
20	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
21	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
22	The value of realâ€time GNSS to earthquake early warning. Geophysical Research Letters, 2017, 44, 8311-8319.	4.0	54
23	Systematic Observations of the Slip Pulse Properties of Large Earthquake Ruptures. Geophysical Research Letters, 2017, 44, 9691-9698.	4.0	51
24	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
25	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
26	Deep embrittlement and complete rupture of the lithosphere during the Mwâ€‰8.2 Tehuantepec earthquake. Nature Geoscience, 2018, 11, 955-960.	12.9	42
27	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
28	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
29	Characterizing large earthquakes before rupture is complete. Science Advances, 2019, 5, eaav2032.	10.3	37
30	Real-Time High-Rate GNSS Displacements: Performance Demonstration during the 2019 Ridgecrest, California, Earthquakes. Seismological Research Letters, 2020, 91, 1943-1951.	1.9	36
31	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
32	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
33	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
34	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
35	The Correlation Lengths and Hypocentral Positions of Great Earthquakes. Bulletin of the Seismological Society of America, 2019, 109, 2582-2593.	2.3	29
36	<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

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37	Recovering coseismic point ground tilts from collocated highâ€rate GPS and accelerometers. Geophysical Research Letters, 2013, 40, 5095-5100.	4.0	26
38	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
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	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
41	A hybrid deterministic and stochastic approach for tsunami hazard assessment in Iquique, Chile. Natural Hazards, 2020, 100, 231-254.	3.4	23
42	Geodetic Observations of Weak Determinism in Rupture Evolution of Large Earthquakes. Journal of Geophysical Research: Solid Earth, 2018, 123, 9950-9962.	3.4	22
43	The Effect of Earthquake Kinematics on Tsunami Propagation. Journal of Geophysical Research: Solid Earth, 2019, 124, 11639-11650.	3.4	22
44	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
45	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
46	Sand deposits reveal great earthquakes and tsunamis at Mexican Pacific Coast. Scientific Reports, 2020, 10, 11452.	3.3	18
47	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
48	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
49	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
50	Longâ€Lived Tsunami Edge Waves and Shelf Resonance From the M8.2 Tehuantepec Earthquake. Geophysical Research Letters, 2018, 45, 12,414.	4.0	16
51	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
52	Was the January 26th, 1700 Cascadia Earthquake Part of a Rupture Sequence?. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021822.	3.4	12
53	Seismogeodetic Pâ€wave Amplitude: No Evidence for Strong Determinism. Geophysical Research Letters, 2019, 46, 11118-11126.	4.0	11
54	A Source Clustering Approach for Efficient Inundation Modeling and Regional Scale Probabilistic Tsunami Hazard Assessment. Frontiers in Earth Science, 2020, 8, .	1.8	11

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55	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
56	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
57	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
58	A Ground-Motion Model for GNSS Peak Ground Displacement. Bulletin of the Seismological Society of America, 2021, 111, 2393-2407.	2.3	10
59	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
60	Energetic Rupture and Tsunamigenesis during the 2020 MwÂ7.4 La Crucecita, Mexico Earthquake. Seismological Research Letters, 2021, 92, 140-150.	1.9	8
61	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
62	Overlapping regions of coseismic and transient slow slip on the Hawaiian dÃ©collement. Earth and Planetary Science Letters, 2020, 544, 116353.	4.4	7
63	Deep Coseismic Slip in the Cascadia Megathrust Can Be Consistent With Coastal Subsidence. Geophysical Research Letters, 2022, 49, e2021GL097404.	4.0	7
64	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
65	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
66	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
67	Magnitude Calculation without Saturation from Strong-Motion Waveforms. Bulletin of the Seismological Society of America, 2021, 111, 50-60.	2.3	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. Pure and Applied Geophysics, 2021, 178, 3291.	1.9	2
70	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
71	A Study of the 2015 M w 8.3 Illapel Earthquake and Tsunami: Numerical and Analytical Approaches. , 2017, , 255-266.		1