Jorge Macias

List of Publications by Year
in descending order

58 papers	1,263 citations	394421 19 h-index	377865 34 g-index
84 all docs	84 docs citations	84 times ranked	1109 citing authors

#	Article	IF	Citations
1	AQ-scheme for a class of systems of coupled conservation laws with source term. Application to a two-layer 1-D shallow water system. ESAIM: Mathematical Modelling and Numerical Analysis, 2001, 35, 107-127.	1.9	132
2	The numerical treatment of wet/dry fronts in shallow flows: application to one-layer and two-layer systems. Mathematical and Computer Modelling, 2005, 42, 419-439.	2.0	108
3	Numerical simulation of two-layer shallow water flows through channels with irregular geometry. Journal of Computational Physics, 2004, 195, 202-235.	3.8	84
4	Inter-model analysis of tsunami-induced coastal currents. Ocean Modelling, 2017, 114, 14-32.	2.4	79
5	Probabilistic Tsunami Hazard and Risk Analysis: A Review of Research Gaps. Frontiers in Earth Science, 2021, 9, .	1.8	65
6	Performance Benchmarking of Tsunami-HySEA Model for NTHMPâ€™s Inundation Mapping Activities. Pure and Applied Geophysics, 2017, 174, 3147-3183.	1.9	52
7	The Making of the NEAM Tsunami Hazard Model 2018 (NEAMTHM18). Frontiers in Earth Science, 2021, 8, .	1.8	50
8	Advanced recognition of explosives in traces on polymer surfaces using LIBS and supervised learning classifiers. Analytica Chimica Acta, 2014, 806, 107-116.	5.4	44
9	The Al-Borani submarine landslide and associated tsunami. A modelling approach. Marine Geology, 2015, 361, 79-95.	2.1	44
10	Recognition of explosives fingerprints on objects for courier services using machine learning methods and laser-induced breakdown spectroscopy. Talanta, 2013, 110, 108-117.	5.5	39
11	Six thousand years of coastline evolution in the Guadalfeo deltaic system (southern Iberian) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T	2.6	39
12	New chemometrics in laser-induced breakdown spectroscopy for recognizing explosive residues. Journal of Analytical Atomic Spectrometry, 2012, 27, 2111.	3.0	38
13	Probabilistic tsunami forecasting for early warning. Nature Communications, 2021, 12, 5677.	12.8	37
14	Probabilistic Tsunami Hazard Analysis: High Performance Computing for Massive Scale Inundation Simulations. Frontiers in Earth Science, 2020, 8, .	1.8	28
15	Fast evaluation of tsunami scenarios: uncertainty assessment for a Mediterranean Sea database. Natural Hazards and Earth System Sciences, 2016, 16, 2593-2602.	3.6	26
16	The Lituya Bay landslide-generated mega-tsunami â€“ numerical simulation and sensitivity analysis. Natural Hazards and Earth System Sciences, 2019, 19, 369-388.	3.6	24
17	Performance assessment of the Tsunami-HySEA model for NTHMP tsunami currents benchmarking. Laboratory data. Coastal Engineering, 2020, 158, 103667.	4.0	24
18	Performance assessment of Tsunami-HySEA model for NTHMP tsunami currents benchmarking. Field cases. Ocean Modelling, 2020, 152, 101645.	2.4	22

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19	Comparison and Computational Performance of Tsunami-HySEA and MOST Models for LANTEX 2013 Scenario: Impact Assessment on Puerto Rico Coasts. Pure and Applied Geophysics, 2016, 173, 3973-3997.	1.9	21
20	Improvement and generalization of a finite element shallow-water solver to multi-layer systems. International Journal for Numerical Methods in Fluids, 1999, 31, 1037-1059.	1.6	18
21	Spatial variability of prodeltaic undulations on the Guadalfeo River prodelta: support to the genetic interpretation as hyperpycnal flow deposits. Marine Geophysical Researches, 2015, 36, 309-333.	1.2	18
22	Validation and inter-comparison of models for landslide tsunami generation. Ocean Modelling, 2022, 170, 101943.	2.4	18
23	Improved FVM for two-layer shallow-water models: Application to the Strait of Gibraltar. Advances in Engineering Software, 2007, 38, 386-398.	3.8	17
24	Submarine deltaic geometries linked to steep, mountainous drainage basins in the northern shelf of the Alboran Sea: Filling the gaps in the spectrum of deltaic deposition. Geomorphology, 2015, 232, 125-144.	2.6	17
25	Modeling Tsunamis Generated by Submarine Landslides at Stromboli Volcano (Aeolian Islands, Italy): A Numerical Benchmark Study. Frontiers in Earth Science, 2021, 9, .	1.8	17
26	Enabling dynamic and intelligent workflows for HPC, data analytics, and AI convergence. Future Generation Computer Systems, 2022, 134, 414-429.	7.5	17
27	Urgent Tsunami Computing. , 2019, , .		16
28	Testing Tsunami Inundation Maps for Evacuation Planning in Italy. Frontiers in Earth Science, 2021, 9, .	1.8	16
29	On the convergence of the BermÃºdez-Moreno algorithm with constant parameters. Numerische Mathematik, 2002, 92, 113-128.	1.9	15
30	Spatial variability of surficial sediments on the northern shelf of the Alboran Sea: the effects of hydrodynamic forcing and supply of sediment by rivers. Journal of Iberian Geology, 2011, 37, .	1.3	15
31	Duality methods with an automatic choice of parameters Application to shallow water equations in conservative form. Numerische Mathematik, 2001, 89, 161-189.	1.9	14
32	Multilayer-HySEA model validation for landslide-generated tsunamis â€“ Part 1: Rigid slides. Natural Hazards and Earth System Sciences, 2021, 21, 775-789.	3.6	11
33	Offshore Geological Hazards: Charting the Course of Progress and Future Directions. Oceans, 2021, 2, 393-428.	1.3	11
34	Multilayer-HySEA model validation for landslide-generated tsunamis â€“ PartÂ2: Granular slides. Natural Hazards and Earth System Sciences, 2021, 21, 791-805.	3.6	10
35	The Influence of Depthâ€Varying Elastic Properties of the Upper Plate on Megathrust Earthquake Rupture Dynamics and Tsunamigenesis. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022328.	3.4	10
36	The Sensitivity of Tsunami Impact to Earthquake Source Parameters and Manning Friction in High-Resolution Inundation Simulations. Frontiers in Earth Science, 2022, 9, .	1.8	10

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37	A multivariate intercomparison between three oceanic GCMs using observed current and thermocline depth anomalies in the tropical Pacific during 1985â€“1992. Journal of Marine Systems, 2000, 24, 249-275.	2.1	8
38	Tsunami generation potential of a strike-slip fault tip in the westernmost Mediterranean. Scientific Reports, 2021, 11, 16253.	3.3	7
39	An extreme wave event in eastern YucatÃ¡n, Mexico: Evidence of a palaeotsunami event during the Mayan times. Sedimentology, 2020, 67, 1481-1504.	3.1	6
40	Uncertainty quantification in tsunami modeling using multi-level Monte Carlo finite volume method. Journal of Mathematics in Industry, 2016, 6, .	1.2	4
41	Use of Neural Networks for Tsunami Maximum Height and Arrival Time Predictions. GeoHazards, 2022, 3, 323-344.	1.4	4
42	Modeling the biogeochemical seasonal cycle in the Strait of Gibraltar. Journal of Marine Systems, 2014, 139, 348-361.	2.1	3
43	Comparison and Computational Performance of Tsunami-HySEA and MOST Models for LANTEX 2013 Scenario: Impact Assessment on Puerto Rico Coasts. Pageoph Topical Volumes, 2016, , 3973-3997.	0.2	3
44	A basic reference state suitable for anomaly-coupled ocean-atmosphere climate models. Applied Mathematics Letters, 1999, 12, 21-24.	2.7	2
45	An incomplete LU-based family of preconditioners for numerical resolution of a shallow water system using a duality methodâ€”applications. Applied Mathematics Letters, 2001, 14, 651-656.	2.7	2
46	Realistic Applications of a Tidal 2d Two-Layer Shallow Water Model to the Strait of Gibraltar. , 2009, , .		2
47	Analyzing the tidal-related origin of subinertial flows through the Strait of Gibraltar. Journal of Geophysical Research, 2010, 115, .	3.3	2
48	Tsunami-HySEA: A Numerical Model Developed for Tsunami Early Warning Systems (TEWS). SEMA SIMAI Springer Series, 2021, , 209-226.	0.7	2
49	IFCP Riemann solver. , 2012, , 237-244.		1
50	Prodeltaic Undulations and Hyperpycnal Flows (I): Morphological Observations. , 2017, , 107-112.		1
51	Analysis of Faster-Than-Real-Time (FTRT) Tsunami Simulations for the Spanish Tsunami Warning System for the Atlantic. GeoHazards, 2022, 3, 371-394.	1.4	1
52	Simulation of Internal Waves in the Strait of Gibraltar Using a Two-layer Shallow-water Model. , 2003, , 529-534.		0
53	Numerical simulation in oceanography. applications to the Alboran Sea and the Strait of Gibraltar. , 2004, , 75-98.		0
54	Prodeltaic Undulations and Hyperpycnal Flows (II): Evolutionary Trends. , 2017, , 113-120.		0

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55	Nations Work Together to Size Up Caribbean Tsunami Hazards. Eos, 2018, 99, .	0.1	0
56	A REVIEW ON HIGH ORDER WELL-BALANCED PATH-CONSERVATIVE FINITE VOLUME SCHEMES FOR GEOPHYSICAL FLOWS. , 2019, , .		0
57	Pseudo-Probabilistic Design for High-Resolution Tsunami Simulations in the Southwestern Spanish Coast. GeoHazards, 2022, 3, 294-322.	1.4	0
58	Improvement and generalization of a finite element shallowâ€water solver to multiâ€layer systems. International Journal for Numerical Methods in Fluids, 1999, 31, 1037-1059.	1.6	0