Costas Emmanuel Synolakis

List of Publications by Year
in descending order

127 papers	8,030 citations	50276 46 h-index	49909 87 g-index
127 all docs	127 docs citations	127 times ranked	3404 citing authors

#	Article	IF	Citations
1	The runup of solitary waves. Journal of Fluid Mechanics, 1987, 185, 523-545.	3.4	775
2	Numerical Modeling of Tidal Wave Runup. Journal of Waterway, Port, Coastal and Ocean Engineering, 1998, 124, 157-171.	1.2	396
3	Runup of solitary waves on a circular Island. Journal of Fluid Mechanics, 1995, 302, 259-285.	3.4	386
4	The slump origin of the 1998 Papua New Guinea Tsunami. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 763-789.	2.1	305
5	Field Survey of the 27 February 2010 Chile Tsunami. Pure and Applied Geophysics, 2011, 168, 1989-2010.	1.9	266
6	Observations by the International Tsunami Survey Team in Sri Lanka. Science, 2005, 308, 1595-1595.	12.6	236
7	Tsunami science before and beyond Boxing Day 2004. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2231-2265.	3.4	230
8	Runup and rundown generated by three-dimensional sliding masses. Journal of Fluid Mechanics, 2005, 536, 107-144.	3.4	225
9	Laboratory experiments of tsunami runup on a circular island. Pure and Applied Geophysics, 1995, 144, 569-593.	1.9	205
10	Modeling of Breaking and Nonbreaking Long-Wave Evolution and Runup Using VTCS-2. Journal of Waterway, Port, Coastal and Ocean Engineering, 1995, 121, 308-316.	1.2	204
11	The 2011 Japan tsunami current velocity measurements from survivor videos at Kesennuma Bay using LiDAR. Geophysical Research Letters, 2012, 39, .	4.0	199
12	Source discriminants for near-field tsunamis. Geophysical Journal International, 2004, 158, 899-912.	2.4	188
13	Geoarchaeological tsunami deposits at Palaikastro (Crete) and the Late Minoan IA eruption of Santorini. Journal of Archaeological Science, 2008, 35, 191-212.	2.4	171
14	Far-field tsunami hazard from mega-thrust earthquakes in the Indian Ocean. Geophysical Journal International, 2008, 172, 995-1015.	2.4	157
15	Model for the Leading Waves of Tsunamis. Physical Review Letters, 1996, 77, 2141-2144.	7.8	156
16	Long wave runup on piecewise linear topographies. Journal of Fluid Mechanics, 1998, 374, 1-28.	3.4	155
17	Tsunami in Papua New Guinea was as intense as first thought. Eos, 1999, 80, 101.	0.1	140
18	Extreme inundation flows during the Hokkaido-Nansei-Oki Tsunami. Geophysical Research Letters, 1997, 24, 1315-1318.	4.0	139

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19	2004 Indian Ocean tsunami flow velocity measurements from survivor videos. Geophysical Research Letters, 2006, 33, .	4.0	134
20	The 2010 M_w 7.8 Mentawai earthquake: Very shallow source of a rare tsunami earthquake determined from tsunami field survey and nearâ€field GPS data. Journal of Geophysical Research, 2012, 117, .	3.3	130
21	Extreme runup from the 17 July 2006 Java tsunami. Geophysical Research Letters, 2007, 34, .	4.0	120
22	Propagation and amplification of tsunamis at coastal boundaries. Nature, 1994, 372, 353-355.	27.8	114
23	The Flores Island tsunamis. Eos, 1993, 74, 369.	0.1	113
24	The 1956 earthquake and tsunami in Amorgos, Greece. Geophysical Journal International, 2009, 178, 1533-1554.	2.4	112
25	Report on the International Workshop on Long-Wave Run-up. Journal of Fluid Mechanics, 1991, 229, 675.	3.4	104
26	Tsunami inundation modeling for western Sumatra. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 19673-19677.	7.1	95
27	A Theoretical Comparison of Tsunamis from Dislocations and Landslides. Pure and Applied Geophysics, 2003, 160, 2177-2188.	1.9	86
28	Oman Field Survey after the December 2004 Indian Ocean Tsunami. Earthquake Spectra, 2006, 22, 203-218.	3.1	85
29	Analytical solutions for forced long waves on a sloping beach. Journal of Fluid Mechanics, 2003, 478, 101-109.	3.4	84
30	Field Survey and Numerical Simulations: A Review of the 1998 Papua New Guinea Tsunami. Pure and Applied Geophysics, 2003, 160, 2119-2146.	1.9	83
31	Initial Value Problem Solution of Nonlinear Shallow Water-Wave Equations. Physical Review Letters, 2006, 97, 148501.	7.8	83
32	Tsunami runup on steep slopes: How good linear theory really is. Natural Hazards, 1991, 4, 221-234.	3.4	81
33	Runup Measurements of the December 2004 Indian Ocean Tsunami. Earthquake Spectra, 2006, 22, 67-91.	3.1	75
34	Tsunami Catalogs for the Eastern Mediterranean, Revisited. Journal of Earthquake Engineering, 2010, 14, 309-330.	2.5	75
35	Tsunami: WAVE of CHANGE. Scientific American, 2006, 294, 56-63.	1.0	72
36	Sri Lanka Field Survey after the December 2004 Indian Ocean Tsunami. Earthquake Spectra, 2006, 22, 155-172.	3.1	71

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37	A New Tool for Inundation Modeling: Community Modeling Interface for Tsunamis (ComMIT). Pure and Applied Geophysics, 2011, 168, 2121-2131.	1.9	70
38	Evolution of Maximum Amplitude of Solitary Waves on Plane Beaches. Journal of Waterway, Port, Coastal and Ocean Engineering, 1993, 119, 323-342.	1.2	67
39	Field survey of the East Java earthquake and tsunami of June 3, 1994. Pure and Applied Geophysics, 1995, 144, 839-854.	1.9	67
40	Sedimentary Deposits from the 17 July 2006 Western Java Tsunami, Indonesia: Use of Grain Size Analyses to Assess Tsunami Flow Depth, Speed, and Traction Carpet Characteristics. Pure and Applied Geophysics, 2011, 168, 1951-1961.	1.9	67
41	Insights on the 2009 South Pacific tsunami in Samoa and Tonga from field surveys and numerical simulations. Earth-Science Reviews, 2011, 107, 66-75.	9.1	64
42	Tsunami Simulations for Regional Sources in the South China and Adjoining Seas. Pure and Applied Geophysics, 2011, 168, 1153-1173.	1.9	58
43	Development of MOST for Real-Time Tsunami Forecasting. Journal of Waterway, Port, Coastal and Ocean Engineering, 2016, 142, .	1.2	58
44	Greenâ€™s law and the evolution of solitary waves. Physics of Fluids A, Fluid Dynamics, 1991, 3, 490-491.	1.6	56
45	Earthquake-Induced Liquefaction around Marine Structures. Journal of Waterway, Port, Coastal and Ocean Engineering, 2007, 133, 55-82.	1.2	55
46	Tsunamis within the Eastern Santa Barbara Channel. Geophysical Research Letters, 2001, 28, 643-646.	4.0	53
47	Northern Sumatra Field Survey after the December 2004 Great Sumatra Earthquake and Indian Ocean Tsunami. Earthquake Spectra, 2006, 22, 93-104.	3.1	49
48	Tsunamis: bridging science, engineering and society. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140369.	3.4	47
49	The Fukushima accident was preventable. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140379.	3.4	46
50	Generation of Long Waves in Laboratory. Journal of Waterway, Port, Coastal and Ocean Engineering, 1990, 116, 252-266.	1.2	45
51	Field survey of the 1994 Mindoro Island, Philippines tsunami. Pure and Applied Geophysics, 1995, 144, 875-890.	1.9	45
52	Field survey of Mexican tsunami produces new data, unusual photos. Eos, 1997, 78, 85.	0.1	44
53	The anomalous behavior of the runup of cnoidal waves. Physics of Fluids, 1988, 31, 3-5.	1.4	41
54	Maldives Field Survey after the December 2004 Indian Ocean Tsunami. Earthquake Spectra, 2006, 22, 137-154.	3.1	41

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55	Evaluating Tsunami Hazard in the Northwestern Indian Ocean. Pure and Applied Geophysics, 2008, 165, 2045-2058.	1.9	39
56	On combining the Bernoulli and Poiseuille equationâ€"A plea to authors of college physics texts. American Journal of Physics, 1989, 57, 1013-1019.	0.7	32
57	Field Survey and Numerical Modelling of the December 22, 2018 Anak Krakatau Tsunami. Pure and Applied Geophysics, 2020, 177, 2457-2475.	1.9	31
58	Vanuatu earthquake and tsunami cause much damage, few casualties. Eos, 2000, 81, 641-647.	0.1	30
59	Tsunami sources in the southern California bight. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	30
60	Long-Wave Runup Models. , 1997, , .		29
61	The earthquake and tsunami of 1865 November 17: evidence for far-field tsunami hazard from Tonga. Geophysical Journal International, 2004, 157, 164-174.	2.4	29
62	Tsunami inundation at Crescent City, California generated by earthquakes along the Cascadia Subduction Zone. Geophysical Research Letters, 2007, 34, .	4.0	29
63	Anatomy of strike-slip fault tsunami genesis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	29
64	Palaeotsunamis and tsunami hazards in the Eastern Mediterranean. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140374.	3.4	28
65	The 20th July 2017 Bodrumâ€"Kos Tsunami Field Survey. Pure and Applied Geophysics, 2019, 176, 2925-2949.	1.9	28
66	Sequencing of tsunami waves: why the first wave is not always the largest. Geophysical Journal International, 2016, 204, 719-735.	2.4	27
67	On the roots of $f(z)=J_0(z)-iJ_1(z)$. Quarterly of Applied Mathematics, 1988, 46, 105-107.	0.7	26
68	Tsunami Hazards Associated with the Catalina Fault in Southern California. Earthquake Spectra, 2004, 20, 917-950.	3.1	26
69	Focusing of long waves with finite crest over constant depth. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130015.	2.1	26
70	India must cooperate on tsunami warning system. Nature, 2005, 434, 17-18.	27.8	25
71	Application of a finite difference computational model to the simulation of earthquake generated tsunamis. Applied Numerical Mathematics, 2013, 67, 111-125.	2.1	22
72	Tsunami and Seiche. New Directions in Civil Engineering, 2002, , .	0.1	20

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73	Could it Happen Here?. Civil Engineering, 2005, 75, 54-133.	0.1	17
74	Late Holocene uplift of Rhodes, Greece: evidence for a large tsunamigenic earthquake and the implications for the tectonics of the eastern Hellenic Trench System. Geophysical Journal International, 2015, 203, 459-474.	2.4	16
75	A Second Generation of Tsunami Inundation Maps for the State of California. Pure and Applied Geophysics, 2011, 168, 2133-2146.	1.9	15
76	Heavy Metal Distribution in Opportunistic Beach Nourishment: A Case Study in Greece. Scientific World Journal, The, 2013, 2013, 1-5.	2.1	13
77	A review of coastal community vulnerabilities toward resilience benefits from disaster reduction measures. Environmental Hazards, 2010, 9, 222-232.	2.5	12
78	Reassessing the tsunami risk in major ports and harbors of California I: San Diego. Natural Hazards, 2011, 58, 479-496.	3.4	12
79	Lagrangian flow measurements and observations of the 2015 Chilean tsunami in Ventura, CA. Geophysical Research Letters, 2016, 43, 5217-5224.	4.0	12
80	Field survey of the 30 October 2020 Samos (Aegean Sea) tsunami in the Greek islands. Bulletin of Earthquake Engineering, 2022, 20, 7873-7905.	4.1	12
81	Modeling of the November 3, 1994 Skagway, Alaska Tsunami. , 2002, , 915.		11
82	Coastal Resilience: Can We Get Beyond Planning the Last Disaster?. , 2011, , .		10
83	Coastal Boulders on the SE Coasts of Cyprus as Evidence of Palaeo-Tsunami Events. Journal of Marine Science and Engineering, 2020, 8, 812.	2.6	10
84	Tsunami Runup on Steep Slopes: How Good Linear Theory Really Is. , 1991, , 221-234.		10
85	Field Survey and Numerical Simulations: A Review of the 1998 Papua New Guinea Tsunami. , 2003, , 2119-2146.		9
86	Wave overtopping due to harbour resonance. Coastal Engineering, 2021, 169, 103973.	4.0	9
87	EXACT SOLUTIONS OF THE SHALLOW-WATER WAVE EQUATIONS. Series on Quality, Reliability and Engineering Statistics, 1999, , 61-131.	0.2	8
88	Plausible megathrust tsunamis in the eastern Mediterranean Sea. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2014, 167, 99-105.	0.4	8
89	Temporal and Topographic Source Effects on Tsunami Generation. Journal of Geophysical Research: Oceans, 2019, 124, 5270-5288.	2.6	8
90	The Chios, Greece Earthquake of 23 July 1949: Seismological Reassessment and Tsunami Investigations. Pure and Applied Geophysics, 2020, 177, 1295-1313.	1.9	8

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91	New Maps of California to Improve Tsunami Preparedness. Eos, 2009, 90, 137-138.	0.1	7
92	Discussion of â€œ Wave Reflection and Runâ€Up on Rough Slopes â€•by Nobuhisa Kobayashi, Ashwini K. Otta, and Indarajut Roy (May, 1987, Vol. 113, No. 4). Journal of Waterway, Port, Coastal and Ocean Engineering, 1989, 115, 139-143.	1.2	6
93	Passive control of delta wing rock. Journal of Aircraft, 1993, 30, 131-133.	2.4	6
94	Tsunami Dynamics, Forecasting, and Mitigation. , 2015, , 15-57.		6
95	Tsunami Generation Above a Sill. Pure and Applied Geophysics, 2015, 172, 985-1002.	1.9	6
96	Laboratory Experiments of Tsunami Runup on a Circular Island. , 1995, , 569-593.		6
97	The <i>M</i>w = 6.6 earthquake and tsunami of south Crete on 2020 May 2. Geophysical Journal International, 2022, 230, 480-506.	2.4	6
98	Developing Inundation Maps for Southern California. , 2002, , 848.		5
99	BENCHMARK PROBLEMS. Series on Quality, Reliability and Engineering Statistics, 2008, , 223-230.	0.2	5
100	Roots of $J_gamma (z)pm iJ_{gamma +1}(z)=0$ and the evaluation of integrals with cylindrical function kernels. Quarterly of Applied Mathematics, 1994, 52, 103-112.	0.7	5
101	Determining Hydrodynamic Force on Accelerating Plate in Fluid with Free Surface. Journal of Engineering Mechanics - ASCE, 1989, 115, 2480-2492.	2.9	4
102	AMPLITUDE EVOLUTION AND RUNUP OF LONG WAVES: COMPARISON OF EXPERIMENTAL AND NUMERICAL DATA ON A 3D COMPLEX TOPOGRAPHY. Series on Quality, Reliability and Engineering Statistics, 2008, , 243-247.	0.2	4
103	The Plight of the Beaches of Crete. , 2008, , .		4
104	Palaeo-Tsunami Events on the Coasts of Cyprus. Geosciences (Switzerland), 2022, 12, 58.	2.2	4
105	Choking on carbon emissions from Greek academic paperwork. Nature, 2009, 461, 167-167.	27.8	3
106	The Great Cretan Splash Up-A Coastal Disaster Preparedness Exercise in Greece. , 2011, , .		3
107	A STUDY OF WAVE AMPLIFICATION IN THE VENETIAN HARBOR OF CHANIA, CRETE. Coastal Engineering Proceedings, 2015, 1, 59.	0.1	3
108	Twenty Challenges in Incident Planning. Journal of Homeland Security and Emergency Management, 2017, 14, .	0.5	3

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109	A Theoretical Comparison of Tsunamis from Dislocations and Landslides. , 2003, , 2177-2188.		3
110	Solving the Puzzle of the 1998 Papua New Guinea Tsunami: The Case for a Slump. , 2002, , 863.		2
111	Temporal and Spatial Evolution of Potential Energy, Kinetic Energy, and Momentum Flux in Tsunami Waves during Breaking and Inundation. Journal of Waterway, Port, Coastal and Ocean Engineering, 2017, 143, 04017018.	1.2	2
112	Numerical modeling of tsunamis and tsunami vulnerability analysis for Heraklion, Crete. Mathematical Methods in the Applied Sciences, 2018, 41, 1068-1073.	2.3	2
113	Are Solitary Waves the Limiting Waves in Long Wave Runup?. , 1989, , 219.		1
114	TSUNAMI HYDRODYNAMIC MODELING: STANDARDS AND GUIDELINES. , 2009, , 127-145.		1
115	Evaluating Tsunami Hazard in the Northwestern Indian Ocean. , 2008, , 2045-2058.		1
116	Geologie Setting, Field Survey and Modeling of the Chimbote, Northern Peru, Tsunami of 21 February 1996. , 1999, , 513-540.		1
117	COASTAL HAZARD PREVENTION AND RESPONSE EVALUATION. , 2005, , .		1
118	THE ROLE OF REGIONAL SEDIMENT MANAGEMENT IN COASTAL ZONE MANAGEMENT. , 2009, , .		1
119	On the Maximum Runup of Cnoidal Waves.. , 1989, , 553.		0
120	Tsunami Inundation from Great Earthquakes on the Cascadia Subduction Zone along the Northern California Coast. , 2008, , .		0
121	Observations and Modeling of the 27 February 2010 Tsunami in Chile. , 2011, , .		0
122	The Regional Economic Cost of a Tsunami Wave Generated by a Submarine Landslide Off of Palos Verdes, California. , 2005, , 65-94.		0
123	GENERATION AND PROPAGATION OF TSUNAMIS TRIGGERED BY EARTHQUAKES AND LANDSLIDES: A THEORETICAL AND A SIMULATION VIEWPOINT. , 2006, , .		0
124	MODELING FAR-FIELD TSUNAMIS FOR CALIFORNIA PORTS AND HARBORS. , 2007, , .		0
125	Field Survey of the 1994 Mindoro Island, Philippines Tsunami. , 1995, , 875-890.		0
126	A Realistic Model for the 1992-96 Tidal Waves. , 1997, , .		0

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127	Long Wave Runup on Coastal Structures. , 1997, , .		0