

Curt D Storlazzi

List of Publications by Year in descending order

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103
papers

4,693
citations

126907

33
h-index

110387

64
g-index

134
all docs

134
docs citations

134
times ranked

4245
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterizing storm-induced coastal change hazards along the United States West Coast. <i>Scientific Data</i> , 2022, 9, .	5.3	3
2	A Numerical Study of Geomorphic and Oceanographic Controls on Wave-Driven Runup on Fringing Reefs with Shore-Normal Channels. <i>Journal of Marine Science and Engineering</i> , 2022, 10, 828.	2.6	2
3	Role of Future Reef Growth on Morphological Response of Coral Reef Islands to Sea-Level Rise. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2020JF005749.	2.8	10
4	The Contribution of Currents, Sea-Swell Waves, and Infragravity Waves to Suspended Sediment Transport Across a Coral Reef Lagoon System. <i>Journal of Geophysical Research: Oceans</i> , 2021, 126, e2020JC017010.	2.6	12
5	The value of US coral reefs for flood risk reduction. <i>Nature Sustainability</i> , 2021, 4, 688-698.	23.7	41
6	A Numerical Study of Wave-Driven Mean Flows and Setup Dynamics at a Coral Reef Lagoon System. <i>Journal of Geophysical Research: Oceans</i> , 2021, 126, e2020JC016811.	2.6	22
7	Coral Reef Restorations Can Be Optimized to Reduce Coastal Flooding Hazards. <i>Frontiers in Marine Science</i> , 2021, 8, .	2.5	14
8	Rapid observations of ocean dynamics and stratification along a steep island coast during Hurricane Maria. <i>Science Advances</i> , 2021, 7, .	10.3	7
9	Online-coupling of widely-ranged timescales to model coral reef development. <i>Environmental Modelling and Software</i> , 2021, 143, 105103.	4.5	1
10	Land-based sediment sources and transport to southwest Puerto Rico coral reefs after Hurricane Maria, May 2017 to June 2018. <i>Estuarine, Coastal and Shelf Science</i> , 2021, 259, 107476.	2.1	4
11	Rebounds, regresses, and recovery: A 15-year study of the coral reef community at Pilaia, Kauai after decades of natural and anthropogenic stress events. <i>Marine Pollution Bulletin</i> , 2021, 171, 112306.	5.0	1
12	Sea Level Rise Will Drive Divergent Sediment Transport Patterns on Fore Reefs and Reef Flats, Potentially Causing Erosion on Atoll Islands. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020, 125, e2019JF005446.	2.8	14
13	The importance of explicitly modelling sea-swell waves for runup on reef-lined coasts. <i>Coastal Engineering</i> , 2020, 160, 103704.	4.0	24
14	Modelling three-dimensional flow over spur-and-groove morphology. <i>Coral Reefs</i> , 2020, 39, 1841-1858.	2.2	4
15	Internal tides can provide thermal refugia that will buffer some coral reefs from future global warming. <i>Scientific Reports</i> , 2020, 10, 13435.	3.3	26
16	Hydro-Morphological Characterization of Coral Reefs for Wave Runup Prediction. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	12
17	In situ Observations of Wave Transformation and Infragravity Bore Development Across Reef Flats of Varying Geomorphology. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	8
18	Steps to Develop Early Warning Systems and Future Scenarios of Storm Wave-Driven Flooding Along Coral Reef-Lined Coasts. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	19

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19	Spectral Wave-Driven Bedload Transport Across a Coral Reef Flat/Lagoon Complex. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	6
20	An introduction to the "Oceans and Society: Blue Planet"™ initiative. <i>Journal of Operational Oceanography</i> , 2019, 12, S1-S11.	1.2	7
21	Physicochemical Controls on Zones of Higher Coral Stress Where Black Band Disease Occurs at Mākaua Reef, Kaua'i, Hawai'i. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	4
22	The Risk Reduction Benefits of the Mesoamerican Reef in Mexico. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	32
23	Modeling Sediment Bypassing around Idealized Rocky Headlands. <i>Journal of Marine Science and Engineering</i> , 2019, 7, 40.	2.6	13
24	HyCReWW: A Hybrid Coral Reef Wave and Water level metamodel. <i>Computers and Geosciences</i> , 2019, 127, 85-90.	4.2	27
25	Assessing Morphologic Controls on Atoll Island Alongshore Sediment Transport Gradients Due to Future Sea-Level Rise. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	24
26	Commentary: Variability in Shelf Sedimentation in Response to Fluvial Sediment Supply and Coastal Erosion Over the Past 1,000 Years in Monterey Bay, CA, United States. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	1
27	Geochemical sourcing of runoff from a young volcanic watershed to an impacted coral reef in Pelekane Bay, Hawaii. <i>Science of the Total Environment</i> , 2019, 649, 353-363.	8.0	3
28	Waves do not contribute to global sea-level rise. <i>Nature Climate Change</i> , 2019, 9, 2-2.	18.8	12
29	Morphodynamics of a field of crescent-shaped rippled scour depressions: Northern Monterey Bay, CA. <i>Marine Geology</i> , 2019, 407, 44-59.	2.1	6
30	Tropical Cyclone Projections: Changing Climate Threats for Pacific Island Defense Installations. <i>Weather, Climate, and Society</i> , 2019, 11, 3-15.	1.1	12
31	Meteorologic, oceanographic, and geomorphic controls on circulation and residence time in a coral reef-lined embayment: Faga'alu Bay, American Samoa. <i>Coral Reefs</i> , 2018, 37, 457-469.	2.2	13
32	Spatial Variability of Sediment Transport Processes Over Intratidal and Subtidal Timescales Within a Fringing Coral Reef System. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 1013-1034.	2.8	21
33	Mechanisms of Wave-Driven Water Level Variability on Reef-Fringed Coastlines. <i>Journal of Geophysical Research: Oceans</i> , 2018, 123, 3811-3831.	2.6	55
34	Most atolls will be uninhabitable by the mid-21st century because of sea-level rise exacerbating wave-driven flooding. <i>Science Advances</i> , 2018, 4, eaap9741.	10.3	279
35	Carbonate system parameters of an algal-dominated reef along West Maui. <i>Biogeosciences</i> , 2018, 15, 2467-2480.	3.3	7
36	Currents, waves and sediment transport around the headland of Pt. Dume, California. <i>Continental Shelf Research</i> , 2018, 171, 63-76.	1.8	13

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37	Sources and dispersal of land-based runoff from small Hawaiian drainages to a coral reef: Insights from geochemical signatures. <i>Estuarine, Coastal and Shelf Science</i> , 2017, 188, 69-80.	2.1	13
38	Sediment transport in the presence of large reef bottom roughness. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 1347-1368.	2.6	38
39	Land-use change and managed aquifer recharge effects on the hydrogeochemistry of two contrasting atoll island aquifers, Roi-Namur Island, Republic of the Marshall Islands. <i>Applied Geochemistry</i> , 2017, 80, 58-71.	3.0	11
40	Projected atoll shoreline and run-up changes in response to sea-level rise and varying large wave conditions at Wake and Midway Atolls, Northwestern Hawaiian Islands. <i>Geomorphology</i> , 2017, 295, 537-550.	2.6	24
41	Vulnerability of Coral Reefs to Bioerosion From Land-Based Sources of Pollution. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 9319-9331.	2.6	66
42	A Bayesian-Based System to Assess Wave-Driven Flooding Hazards on Coral Reef-Lined Coasts. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 10099-10117.	2.6	68
43	Doubling of coastal flooding frequency within decades due to sea-level rise. <i>Scientific Reports</i> , 2017, 7, 1399.	3.3	518
44	Atoll Groundwater Movement and Its Response to Climatic and Sea-Level Fluctuations. <i>Water (Switzerland)</i> , 2017, 9, 650.	2.7	18
45	Changes to extreme wave climates of islands within the Western Tropical Pacific throughout the 21st century under RCP 4.5 and RCP 8.5, with implications for island vulnerability and sustainability. <i>Global and Planetary Change</i> , 2016, 141, 25-38.	3.5	47
46	Identification and classification of very low frequency waves on a coral reef flat. <i>Journal of Geophysical Research: Oceans</i> , 2016, 121, 7560-7574.	2.6	38
47	End of the chain? Rugosity and fine-scale bathymetry from existing underwater digital imagery using structure-from-motion (SfM) technology. <i>Coral Reefs</i> , 2016, 35, 889-894.	2.2	87
48	Variability of the internal tide on the southern Monterey Bay continental shelf and associated bottom boundary layer sediment transport. <i>Continental Shelf Research</i> , 2016, 120, 68-81.	1.8	11
49	Observations of wave transformation over a fringing coral reef and the importance of low-frequency waves and offshore water levels to runup, overwash, and coastal flooding. <i>Journal of Geophysical Research: Oceans</i> , 2016, 121, 3121-3140.	2.6	112
50	What a drag: Quantifying the global impact of chronic bottom trawling on continental shelf sediment. <i>Journal of Marine Systems</i> , 2016, 159, 109-119.	2.1	104
51	Environmental controls on spatial patterns in the long-term persistence of giant kelp in central California. <i>Ecological Monographs</i> , 2016, 86, 45-60.	5.4	24
52	The influence of coral reefs and climate change on wave-driven flooding of tropical coastlines. <i>Geophysical Research Letters</i> , 2015, 42, 6407-6415.	4.0	198
53	MECHANICS OF SEDIMENT SUSPENSION AND TRANSPORT WITHIN A FRINGING REEF. , 2015, , .		0
54	Many Atolls May be Uninhabitable Within Decades Due to Climate Change. <i>Scientific Reports</i> , 2015, 5, 14546.	3.3	135

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55	Will the Effects of Sea-Level Rise Create Ecological Traps for Pacific Island Seabirds?. PLoS ONE, 2015, 10, e0136773.	2.5	68
56	Vertical convergence of resuspended sediment and subducted phytoplankton to a persistent detached layer over the southern shelf of Monterey Bay, California. Journal of Geophysical Research: Oceans, 2015, 120, 3462-3483.	2.6	2
57	The influence of grain size, grain color, and suspended-sediment concentration on light attenuation: Why fine-grained terrestrial sediment is bad for coral reef ecosystems. Coral Reefs, 2015, 34, 967-975.	2.2	88
58	Upwelling rebound, ephemeral secondary pycnoclines, and the creation of a near-bottom wave guide over the Monterey Bay continental shelf. Geophysical Research Letters, 2014, 41, 8503-8511.	4.0	7
59	The effectiveness of coral reefs for coastal hazard risk reduction and adaptation. Nature Communications, 2014, 5, 3794.	12.8	577
60	Suspended particulate layers and internal waves over the southern Monterey Bay continental shelf: An important control on shelf mud belts?. Journal of Geophysical Research: Oceans, 2014, 119, 428-444.	2.6	35
61	Wave-driven sediment mobilization on a storm-controlled continental shelf (Northwest Iberia). Journal of Marine Systems, 2014, 139, 362-372.	2.1	27
62	Historic impact of watershed change and sedimentation to reefs along west-central Guam. Coral Reefs, 2014, 33, 733-749.	2.2	20
63	Autonomous bed-sediment imaging-systems for revealing temporal variability of grain size. Limnology and Oceanography: Methods, 2014, 12, 390-406.	2.0	12
64	Response of reef corals on a fringing reef flat to elevated suspended-sediment concentrations: Molokai, Hawaii. PeerJ, 2014, 2, e699.	2.0	23
65	EPISODIC SUSPENDED SEDIMENT TRANSPORT AND ELEVATED POLYCYCLIC AROMATIC HYDROCARBON CONCENTRATIONS IN A SMALL, MOUNTAINOUS RIVER IN COASTAL CALIFORNIA. River Research and Applications, 2013, 29, 919-932.	1.7	19
66	Rapid fluctuations in flow and water-column properties in Asan Bay, Guam: implications for selective resilience of coral reefs in warming seas. Coral Reefs, 2013, 32, 949-961.	2.2	10
67	SedPods: a low-cost coral proxy for measuring net sedimentation. Coral Reefs, 2013, 32, 155-159.	2.2	35
68	Short-term variability of ⁷ Be atmospheric deposition and watershed response in a Pacific coastal stream, Monterey Bay, California, USA. Journal of Environmental Radioactivity, 2013, 120, 94-103.	1.7	19
69	Burial and exhumation of temperate bedrock reefs as elucidated by repetitive high-resolution sea floor sonar surveys: Spatial patterns and impacts to species' richness and diversity. Continental Shelf Research, 2013, 55, 40-51.	1.8	11
70	Drivers of circulation in a fringing coral reef embayment: A wave-flow coupled numerical modeling study of Hanalei Bay, Hawaii. Continental Shelf Research, 2013, 58, 79-95.	1.8	34
71	Distribution and abundance of rippled scour depressions along the California coast. Continental Shelf Research, 2013, 69, 88-100.	1.8	25
72	Terrigenous sediment impact on coral recruitment and growth affects the use of coral habitat by recruit parrotfishes (F. Scaridae). Journal of Coastal Conservation, 2013, 17, 417-429.	1.6	44

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73	A Geochemical and Geophysical Assessment of Coastal Groundwater Discharge at Select Sites in Maui and Oâ€™ahu, Hawaiï™. Coastal Research Library, 2013, , 27-46.	0.4	24
74	The influence of sea level rise and changes in fringing reef morphology on gradients in alongshore sediment transport. Geophysical Research Letters, 2013, 40, 3096-3101.	4.0	52
75	Hydrodynamics of spur and groove formations on a coral reef. Journal of Geophysical Research: Oceans, 2013, 118, 3059-3073.	2.6	36
76	Hydrodynamics of a bathymetrically complex fringing coral reef embayment: Wave climate, in situ observations, and wave prediction. Journal of Geophysical Research, 2011, 116, .	3.3	37
77	Wave Climate and Trends Along the Eastern Chukchi Arctic Alaska Coast. , 2011, , .		2
78	THE INFLUENCE OF SEA LEVEL RISE ON FRINGING REEF SEDIMENT DYNAMICS: FIELD OBSERVATIONS AND NUMERICAL MODELING. , 2011, , .		0
79	Sediment dynamics and the burial and exhumation of bedrock reefs along an emergent coastline as elucidated by repetitive sonar surveys: Northern Monterey Bay, CA. Marine Geology, 2011, 289, 46-59.	2.1	13
80	The use (and misuse) of sediment traps in coral reef environments: theory, observations, and suggested protocols. Coral Reefs, 2011, 30, 23-38.	2.2	90
81	Numerical modeling of the impact of sea-level rise on fringing coral reef hydrodynamics and sediment transport. Coral Reefs, 2011, 30, 83-96.	2.2	159
82	NEARSHORE DISPOSAL OF FINE-GRAINED SEDIMENT IN A HIGH-ENERGY ENVIRONMENT: SANTA CRUZ HARBOR CASE STUDY. , 2011, , .		2
83	The influence of El NiÃ±o-Southern Oscillation (ENSO) cycles on wave-driven sea-floor sediment mobility along the central California continental margin. Continental Shelf Research, 2010, 30, 1582-1599.	1.8	23
84	Meeting Reproductive Demands in a Dynamic Upwelling System: Foraging Strategies of a Pursuit-Diving Seabird, the Marbled Murrelet. Condor, 2009, 111, 120-134.	1.6	25
85	Diurnal variability in turbidity and coral fluorescence on a fringing reef flat: Southern Molokai, Hawaii. Estuarine, Coastal and Shelf Science, 2008, 77, 56-64.	2.1	42
86	The relative contribution of processes driving variability in flow, shear, and turbidity over a fringing coral reef: West Maui, Hawaii. Estuarine, Coastal and Shelf Science, 2008, 77, 549-564.	2.1	48
87	Influence of Harbor Construction on Downcoast Morphological Evolution: Santa Barbara, California. , 2008, , .		0
88	Model Scenarios of Shoreline Change at Kaanapali Beach, Maui, Hawaii: Seasonal and Extreme Events. , 2007, , 1227.		7
89	Exploring Rippled Scour Depressions Offshore Huntington Beach, CA. , 2007, , .		3
90	Spatial and temporal variability in oceanographic and meteorologic forcing along Central California and its implications on nearshore processes. Journal of Marine Systems, 2007, 68, 457-472.	2.1	15

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91	Cross-shore velocity shear, eddies and heterogeneity in water column properties over fringing coral reefs: West Maui, Hawaii. <i>Continental Shelf Research</i> , 2006, 26, 401-421.	1.8	32
92	The application of acoustic Doppler current profilers to measure the timing and patterns of coral larval dispersal. <i>Coral Reefs</i> , 2006, 25, 369-381.	2.2	15
93	Quantity, composition, and source of sediment collected in sediment traps along the fringing coral reef off Molokai, Hawaii. <i>Marine Pollution Bulletin</i> , 2006, 52, 1034-1047.	5.0	55
94	A model for wave control on coral breakage and species distribution in the Hawaiian Islands. <i>Coral Reefs</i> , 2005, 24, 43-55.	2.2	89
95	Local wind forcing of the Monterey Bay area inner shelf. <i>Continental Shelf Research</i> , 2005, 25, 397-417.	1.8	25
96	Sediment resuspension and transport patterns on a fringing reef flat, Molokai, Hawaii. <i>Coral Reefs</i> , 2004, 23, 559.	2.2	91
97	Wave- and tidally-driven flow and sediment flux across a fringing coral reef: Southern Molokai, Hawaii. <i>Continental Shelf Research</i> , 2004, 24, 1397-1419.	1.8	122
98	Holocene Reef Accretion: Southwest Molokai, Hawaii, U.S.A.. <i>Journal of Sedimentary Research</i> , 2004, 74, 255-269.	1.6	39
99	Long-term, high-frequency current and temperature measurements along central California: insights into upwelling/relaxation and internal waves on the inner shelf. <i>Continental Shelf Research</i> , 2003, 23, 901-918.	1.8	35
100	Wave Control on Reef Morphology and Coral Distribution: Molokai, Hawaii. , 2002, , 784.		15
101	Influence of El Nino-Southern Oscillation (ENSO) events on the evolution of central California's shoreline. <i>Bulletin of the Geological Society of America</i> , 2000, 112, 236-249.	3.3	106
102	Modeling Fine-Scale Coral Larval Dispersal and Interisland Connectivity to Help Designate Mutually-Supporting Coral Reef Marine Protected Areas: Insights from Maui Nui, Hawaii. <i>Frontiers in Marine Science</i> , 0, 4, .	2.5	23
103	High-resolution observations of submarine groundwater discharge reveal the fine spatial and temporal scales of nutrient exposure on a coral reef: Faga'alu, AS. <i>Coral Reefs</i> , 0, , 1.	2.2	3