

# 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	The effectiveness of coral reefs for coastal hazard risk reduction and adaptation. <i>Nature Communications</i> , 2014, 5, 3794.	12.8	577
2	Doubling of coastal flooding frequency within decades due to sea-level rise. <i>Scientific Reports</i> , 2017, 7, 1399.	3.3	518
3	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
4	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
5	Numerical modeling of the impact of sea-level rise on fringing coral reef hydrodynamics and sediment transport. <i>Coral Reefs</i> , 2011, 30, 83-96.	2.2	159
6	Many Atolls May be Uninhabitable Within Decades Due to Climate Change. <i>Scientific Reports</i> , 2015, 5, 14546.	3.3	135
7	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
8	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
9	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
10	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
11	Sediment resuspension and transport patterns on a fringing reef flat, Molokai, Hawaii. <i>Coral Reefs</i> , 2004, 23, 559.	2.2	91
12	The use (and misuse) of sediment traps in coral reef environments: theory, observations, and suggested protocols. <i>Coral Reefs</i> , 2011, 30, 23-38.	2.2	90
13	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
14	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. <i>Coral Reefs</i> , 2015, 34, 967-975.	2.2	88
15	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
16	Will the Effects of Sea-Level Rise Create Ecological Traps for Pacific Island Seabirds?. <i>PLoS ONE</i> , 2015, 10, e0136773.	2.5	68
17	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
18	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

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19	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
20	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
21	The influence of sea level rise and changes in fringing reef morphology on gradients in alongshore sediment transport. <i>Geophysical Research Letters</i> , 2013, 40, 3096-3101.	4.0	52
22	The relative contribution of processes driving variability in flow, shear, and turbidity over a fringing coral reef: West Maui, Hawaii. <i>Estuarine, Coastal and Shelf Science</i> , 2008, 77, 549-564.	2.1	48
23	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
24	Terrigenous sediment impact on coral recruitment and growth affects the use of coral habitat by recruit parrotfishes (F. Scaridae). <i>Journal of Coastal Conservation</i> , 2013, 17, 417-429.	1.6	44
25	Diurnal variability in turbidity and coral fluorescence on a fringing reef flat: Southern Molokai, Hawaii. <i>Estuarine, Coastal and Shelf Science</i> , 2008, 77, 56-64.	2.1	42
26	The value of US coral reefs for flood risk reduction. <i>Nature Sustainability</i> , 2021, 4, 688-698.	23.7	41
27	Holocene Reef Accretion: Southwest Molokai, Hawaii, U.S.A.. <i>Journal of Sedimentary Research</i> , 2004, 74, 255-269.	1.6	39
28	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
29	Sediment transport in the presence of large reef bottom roughness. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 1347-1368.	2.6	38
30	Hydrodynamics of a bathymetrically complex fringing coral reef embayment: Wave climate, in situ observations, and wave prediction. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	37
31	Hydrodynamics of spur and groove formations on a coral reef. <i>Journal of Geophysical Research: Oceans</i> , 2013, 118, 3059-3073.	2.6	36
32	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
33	SedPods: a low-cost coral proxy for measuring net sedimentation. <i>Coral Reefs</i> , 2013, 32, 155-159.	2.2	35
34	Suspended particulate layers and internal waves over the southern Monterey Bay continental shelf: An important control on shelf mud belts?. <i>Journal of Geophysical Research: Oceans</i> , 2014, 119, 428-444.	2.6	35
35	Drivers of circulation in a fringing coral reef embayment: A wave-flow coupled numerical modeling study of Hanalei Bay, Hawaii. <i>Continental Shelf Research</i> , 2013, 58, 79-95.	1.8	34
36	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

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37	The Risk Reduction Benefits of the Mesoamerican Reef in Mexico. <i>Frontiers in Earth Science</i> , 2019, 7, .	1.8	32
38	Wave-driven sediment mobilization on a storm-controlled continental shelf (Northwest Iberia). <i>Journal of Marine Systems</i> , 2014, 139, 362-372.	2.1	27
39	HyCReWW: A Hybrid Coral Reef Wave and Water level metamodel. <i>Computers and Geosciences</i> , 2019, 127, 85-90.	4.2	27
40	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
41	Local wind forcing of the Monterey Bay area inner shelf. <i>Continental Shelf Research</i> , 2005, 25, 397-417.	1.8	25
42	Meeting Reproductive Demands in a Dynamic Upwelling System: Foraging Strategies of a Pursuit-Diving Seabird, the Marbled Murrelet. <i>Condor</i> , 2009, 111, 120-134.	1.6	25
43	Distribution and abundance of rippled scour depressions along the California coast. <i>Continental Shelf Research</i> , 2013, 69, 88-100.	1.8	25
44	A Geochemical and Geophysical Assessment of Coastal Groundwater Discharge at Select Sites in Maui and Oâ€™ahu, Hawaiâ€™i. <i>Coastal Research Library</i> , 2013, , 27-46.	0.4	24
45	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
46	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
47	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
48	The importance of explicitly modelling sea-swell waves for runup on reef-lined coasts. <i>Coastal Engineering</i> , 2020, 160, 103704.	4.0	24
49	The influence of El NiÃ±o-Southern Oscillation (ENSO) cycles on wave-driven sea-floor sediment mobility along the central California continental margin. <i>Continental Shelf Research</i> , 2010, 30, 1582-1599.	1.8	23
50	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
51	Response of reef corals on a fringing reef flat to elevated suspended-sediment concentrations: Molokaâ€™i, Hawaiâ€™i. <i>PeerJ</i> , 2014, 2, e699.	2.0	23
52	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
53	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
54	Historic impact of watershed change and sedimentation to reefs along west-central Guam. <i>Coral Reefs</i> , 2014, 33, 733-749.	2.2	20

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55	EPISODIC SUSPENDED SEDIMENT TRANSPORT AND ELEVATED POLYCYCLIC AROMATIC HYDROCARBON CONCENTRATIONS IN A SMALL, MOUNTAINOUS RIVER IN COASTAL CALIFORNIA. <i>River Research and Applications</i> , 2013, 29, 919-932.	1.7	19
56	Short-term variability of <sup>7</sup> Be atmospheric deposition and watershed response in a Pacific coastal stream, Monterey Bay, California, USA. <i>Journal of Environmental Radioactivity</i> , 2013, 120, 94-103.	1.7	19
57	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
58	Atoll Groundwater Movement and Its Response to Climatic and Sea-Level Fluctuations. <i>Water (Switzerland)</i> , 2017, 9, 650.	2.7	18
59	Wave Control on Reef Morphology and Coral Distribution: Molokai, Hawaii. , 2002, , 784.		15
60	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
61	Spatial and temporal variability in oceanographic and meteorologic forcing along Central California and its implications on nearshore processes. <i>Journal of Marine Systems</i> , 2007, 68, 457-472.	2.1	15
62	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
63	Coral Reef Restorations Can Be Optimized to Reduce Coastal Flooding Hazards. <i>Frontiers in Marine Science</i> , 2021, 8, .	2.5	14
64	Sediment dynamics and the burial and exhumation of bedrock reefs along an emergent coastline as elucidated by repetitive sonar surveys: Northern Monterey Bay, CA. <i>Marine Geology</i> , 2011, 289, 46-59.	2.1	13
65	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
66	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
67	Currents, waves and sediment transport around the headland of Pt. Dume, California. <i>Continental Shelf Research</i> , 2018, 171, 63-76.	1.8	13
68	Modeling Sediment Bypassing around Idealized Rocky Headlands. <i>Journal of Marine Science and Engineering</i> , 2019, 7, 40.	2.6	13
69	Autonomous bed-sediment imaging-systems for revealing temporal variability of grain size. <i>Limnology and Oceanography: Methods</i> , 2014, 12, 390-406.	2.0	12
70	Waves do not contribute to global sea-level rise. <i>Nature Climate Change</i> , 2019, 9, 2-2.	18.8	12
71	Tropical Cyclone Projections: Changing Climate Threats for Pacific Island Defense Installations. <i>Weather, Climate, and Society</i> , 2019, 11, 3-15.	1.1	12
72	Hydro-Morphological Characterization of Coral Reefs for Wave Runup Prediction. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	12

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73	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
74	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. <i>Continental Shelf Research</i> , 2013, 55, 40-51.	1.8	11
75	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
76	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
77	Rapid fluctuations in flow and water-column properties in Asan Bay, Guam: implications for selective resilience of coral reefs in warming seas. <i>Coral Reefs</i> , 2013, 32, 949-961.	2.2	10
78	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
79	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
80	Model Scenarios of Shoreline Change at Kaanapali Beach, Maui, Hawaii: Seasonal and Extreme Events. , 2007, , 1227.		7
81	Upwelling rebound, ephemeral secondary pycnoclines, and the creation of a near-bottom wave guide over the Monterey Bay continental shelf. <i>Geophysical Research Letters</i> , 2014, 41, 8503-8511.	4.0	7
82	Carbonate system parameters of an algal-dominated reef along West Maui. <i>Biogeosciences</i> , 2018, 15, 2467-2480.	3.3	7
83	An introduction to the "Oceans and Society: Blue Planet"™ initiative. <i>Journal of Operational Oceanography</i> , 2019, 12, S1-S11.	1.2	7
84	Rapid observations of ocean dynamics and stratification along a steep island coast during Hurricane Maria. <i>Science Advances</i> , 2021, 7, .	10.3	7
85	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
86	Spectral Wave-Driven Bedload Transport Across a Coral Reef Flat/Lagoon Complex. <i>Frontiers in Marine Science</i> , 2020, 7, .	2.5	6
87	Physicochemical Controls on Zones of Higher Coral Stress Where Black Band Disease Occurs at Mākuā Reef, Kauaī, Hawaiī. <i>Frontiers in Marine Science</i> , 2019, 6, .	2.5	4
88	Modelling three-dimensional flow over spur-and-groove morphology. <i>Coral Reefs</i> , 2020, 39, 1841-1858.	2.2	4
89	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
90	Exploring Rippled Scour Depressions Offshore Huntington Beach, CA. , 2007, , .		3

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91	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
92	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
93	Characterizing storm-induced coastal change hazards along the United States West Coast. <i>Scientific Data</i> , 2022, 9, .	5.3	3
94	Wave Climate and Trends Along the Eastern Chukchi Arctic Alaska Coast. , 2011, , .		2
95	Vertical convergence of resuspended sediment and subducted phytoplankton to a persistent detached layer over the southern shelf of Monterey Bay, California. <i>Journal of Geophysical Research: Oceans</i> , 2015, 120, 3462-3483.	2.6	2
96	NEARSHORE DISPOSAL OF FINE-GRAINED SEDIMENT IN A HIGH-ENERGY ENVIRONMENT: SANTA CRUZ HARBOR CASE STUDY. , 2011, , .		2
97	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
98	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
99	Online-coupling of widely-ranged timescales to model coral reef development. <i>Environmental Modelling and Software</i> , 2021, 143, 105103.	4.5	1
100	Rebounds, regresses, and recovery: A 15-year study of the coral reef community at Pilaâ€a, Kauaâ€i after decades of natural and anthropogenic stress events. <i>Marine Pollution Bulletin</i> , 2021, 171, 112306.	5.0	1
101	THE INFLUENCE OF SEA LEVEL RISE ON FRINGING REEF SEDIMENT DYNAMICS: FIELD OBSERVATIONS AND NUMERICAL MODELING. , 2011, , .		0
102	MECHANICS OF SEDIMENT SUSPENSION AND TRANSPORT WITHIN A FRINGING REEF. , 2015, , .		0
103	Influence of Harbor Construction on Downcoast Morphological Evolution: Santa Barbara, California. , 2008, , .		0