

A Brad Murray

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

123
papers

5,237
citations

37
h-index

70
g-index

136
ext. papers

5,940
ext. citations

5.2
avg, IF

5.95
L-index

#	Paper	IF	Citations
123	A coupled geomorphic and ecological model of tidal marsh evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 6118-22	11.5	381
122	A cellular model of braided rivers. <i>Nature</i> , 1994 , 371, 54-57	50.4	364
121	Formation of coastline features by large-scale instabilities induced by high-angle waves. <i>Nature</i> , 2001 , 414, 296-300	50.4	343
120	Modelling the effect of vegetation on channel pattern in bedload rivers. <i>Earth Surface Processes and Landforms</i> , 2003 , 28, 131-143	3.7	199
119	Estimation of Discharge From Three Braided Rivers Using Synthetic Aperture Radar Satellite Imagery: Potential Application to Ungaged Basins. <i>Water Resources Research</i> , 1996 , 32, 2021-2034	5.4	198
118	Biomorphodynamics: Physical-biological feedbacks that shape landscapes. <i>Water Resources Research</i> , 2008 , 44,	5.4	151
117	Properties of a cellular braided-stream model. <i>Earth Surface Processes and Landforms</i> , 1997 , 22, 1001-1037	3.7	139
116	A new hypothesis and exploratory model for the formation of large-scale inner-shelf sediment sorting and rippled scour depressions. <i>Continental Shelf Research</i> , 2004 , 24, 295-315	2.4	130
115	Reducing model complexity for explanation and prediction. <i>Geomorphology</i> , 2007 , 90, 178-191	4.3	127
114	Patterns in the sand: From forcing templates to self-organization. <i>Geomorphology</i> , 2007 , 91, 271-290	4.3	125
113	The value of disappearing beaches: A hedonic pricing model with endogenous beach width. <i>Journal of Environmental Economics and Management</i> , 2011 , 61, 297-310	5.3	124
112	High-angle wave instability and emergent shoreline shapes: 1. Modeling of sand waves, flying spits, and capes. <i>Journal of Geophysical Research</i> , 2006 , 111,		121
111	Giant aeolian dune size determined by the average depth of the atmospheric boundary layer. <i>Nature</i> , 2009 , 457, 1120-3	50.4	112
110	Rapid wetland expansion during European settlement and its implication for marsh survival under modern sediment delivery rates. <i>Geology</i> , 2011 , 39, 507-510	5	110
109	Fluvial and marine controls on combined subaerial and subaqueous delta progradation: Morphodynamic modeling of compound-clinoform development. <i>Journal of Geophysical Research</i> , 2005 , 110,		107
108	Coastline responses to changing storm patterns. <i>Geophysical Research Letters</i> , 2006 , 33, n/a-n/a	4.9	106
107	Geomorphology, complexity, and the emerging science of the Earth's surface. <i>Geomorphology</i> , 2009 , 103, 496-505	4.3	96

106	Riparian vegetation as a primary control on channel characteristics in multi-thread rivers. <i>Water Science and Application</i> , 2004 , 43-58		89
105	Forecasting the response of Earth's surface to future climatic and land use changes: A review of methods and research needs. <i>Earth's Future</i> , 2015 , 3, 220-251	7.9	77
104	Temporary vegetation disturbance as an explanation for permanent loss of tidal wetlands. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	75
103	Beach nourishment as a dynamic capital accumulation problem. <i>Journal of Environmental Economics and Management</i> , 2009 , 58, 58-71	5.3	71
102	High-angle wave instability and emergent shoreline shapes: 2. Wave climate analysis and comparisons to nature. <i>Journal of Geophysical Research</i> , 2006 , 111,		65
101	Appropriate complexity for the prediction of coastal and estuarine geomorphic behaviour at decadal to centennial scales. <i>Geomorphology</i> , 2016 , 256, 3-16	4.3	58
100	Measuring the distance between time series. <i>Physica D: Nonlinear Phenomena</i> , 1997 , 102, 187-194	3.3	55
99	A model for sorted circles as self-organized patterns. <i>Journal of Geophysical Research</i> , 2001 , 106, 13287-13306		55
98	An evolving research agenda for human-coastal systems. <i>Geomorphology</i> , 2016 , 256, 81-90	4.3	54
97	How does underlying geology affect coastline change? An initial modeling investigation. <i>Journal of Geophysical Research</i> , 2006 , 111,		52
96	Blind testing of shoreline evolution models. <i>Scientific Reports</i> , 2020 , 10, 2137	4.9	49
95	Contrasting the Goals, Strategies, and Predictions Associated with Simplified Numerical Models and Detailed Simulations. <i>Geophysical Monograph Series</i> , 2013 , 151-165	1.1	49
94	Coastal sustainability depends on how economic and coastline responses to climate change affect each other. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	49
93	Beach and sea-cliff dynamics as a driver of long-term rocky coastline evolution and stability. <i>Geology</i> , 2011 , 39, 1147-1150	5	48
92	Ecological and morphological response of brackish tidal marshland to the next century of sea level rise: Westham Island, British Columbia. <i>Global and Planetary Change</i> , 2008 , 60, 471-486	4.2	47
91	Fetch-limited self-organization of elongate water bodies. <i>Geology</i> , 2009 , 37, 187-190	5	46
90	Climate adaptation and policy-induced inflation of coastal property value. <i>PLoS ONE</i> , 2015 , 10, e0121278	3.7	46
89	Unraveling the dynamics that scale cross-shore headland relief on rocky coastlines: 1. Model development. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014 , 119, 854-873	3.8	43

88	Tidal marshes as disequilibrium landscapes? Lags between morphology and Holocene sea level change. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	42
87	Emergent behavior in a coupled economic and coastline model for beach nourishment. <i>Nonlinear Processes in Geophysics</i> , 2011 , 18, 989-999	2.9	38
86	A unifying framework for shoreline migration: 2. Application to wave-dominated coasts. <i>Journal of Geophysical Research</i> , 2009 , 114,		37
85	Cause and effect in geomorphic systems: Complex systems perspectives. <i>Geomorphology</i> , 2014 , 214, 1-9	4.3	36
84	The complex influences of back-barrier deposition, substrate slope and underlying stratigraphy in barrier island response to sea-level rise: Insights from the Virginia Barrier Islands, Mid-Atlantic Bight, U.S.A.. <i>Geomorphology</i> , 2015 , 246, 334-350	4.3	36
83	Long-term, non-local coastline responses to local shoreline stabilization. <i>Geophysical Research Letters</i> , 2012 , 39, n/a-n/a	4.9	36
82	A New Quantitative Test of Geomorphic Models, Applied to a Model of Braided Streams. <i>Water Resources Research</i> , 1996 , 32, 2579-2587	5.4	36
81	Prediction of wave ripple characteristics using genetic programming. <i>Continental Shelf Research</i> , 2013 , 71, 1-15	2.4	35
80	Validation of Braided-Stream Models: Spatial state-space plots, self-affine scaling, and island shapes. <i>Water Resources Research</i> , 1998 , 34, 2353-2364	5.4	35
79	Preface: Complexity (and simplicity) in landscapes. <i>Geomorphology</i> , 2007 , 91, 173-177	4.3	34
78	Simulating mesoscale coastal evolution for decadal coastal management: A new framework integrating multiple, complementary modelling approaches. <i>Geomorphology</i> , 2016 , 256, 68-80	4.3	33
77	Recent shifts in coastline change and shoreline stabilization linked to storm climate change. <i>Earth Surface Processes and Landforms</i> , 2015 , 40, 569-585	3.7	33
76	Modeling emergent large-scale structures of barchan dune fields. <i>Geology</i> , 2013 , 41, 1059-1062	5	33
75	Emergence of pediments, tors, and piedmont junctions from a bedrock weathering-regolith thickness feedback. <i>Geology</i> , 2006 , 34, 805	5	32
74	Regolith thickness instability and the formation of tors in arid environments. <i>Journal of Geophysical Research</i> , 2006 , 111, n/a-n/a		31
73	Progress in coupling models of human and coastal landscape change. <i>Computers and Geosciences</i> , 2013 , 53, 30-38	4.5	30
72	Exploring the sensitivities of crenulate bay shorelines to wave climates using a new vector-based one-line model. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015 , 120, 2586-2608	3.8	30
71	Long-Term, Large-Scale Morphodynamic Effects of Artificial Dune Construction along a Barrier Island Coastline. <i>Journal of Coastal Research</i> , 2011 , 276, 918-930	0.6	29

70	Large-scale responses of complex-shaped coastlines to local shoreline stabilization and climate change. <i>Journal of Geophysical Research</i> , 2010 , 115,		29
69	Cumulative versus transient shoreline change: Dependencies on temporal and spatial scale. <i>Journal of Geophysical Research</i> , 2011 , 116,		28
68	An integrated hypothesis for regional patterns of shoreline change along the Northern North Carolina Outer Banks, USA. <i>Marine Geology</i> , 2011 , 281, 85-90	3.3	25
67	Modes and emergent time scales of embayed beach dynamics. <i>Geophysical Research Letters</i> , 2014 , 41, 7270-7275	4.9	23
66	Exploring Wave and Sea-Level Rise Effects on Delta Morphodynamics With a Coupled River-Ocean Model. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018 , 123, 2887-2900	3.8	23
65	Instability and finite-amplitude self-organization of large-scale coastline shapes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013 , 371, 20120363	3	21
64	Coupled economic-coastline modeling with suckers and free riders. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013 , 118, 887-899	3.8	20
63	Influence of defects on sorted bedform dynamics. <i>Geophysical Research Letters</i> , 2008 , 35,	4.9	20
62	Sensitivity analysis of pediment development through numerical simulation and selected geospatial query. <i>Geomorphology</i> , 2007 , 88, 329-351	4.3	20
61	Observed changes in hurricane-driven waves explain the dynamics of modern cusped shorelines. <i>Geophysical Research Letters</i> , 2013 , 40, 5867-5871	4.9	19
60	Sorted bed forms as self-organized patterns: 1. Model development. <i>Journal of Geophysical Research</i> , 2007 , 112,		19
59	Decentralized Management Hinders Coastal Climate Adaptation: The Spatial-dynamics of Beach Nourishment. <i>Environmental and Resource Economics</i> , 2017 , 67, 761-787	4.4	18
58	Synergies between Adjacent Beach-Nourishing Communities in a Morpho-Economic Coupled Coastline Model. <i>Coastal Management</i> , 2008 , 36, 374-391	3.3	18
57	Downscaling Changing Coastlines in a Changing Climate: The Hybrid Approach. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018 , 123, 229-251	3.8	17
56	The shape of patterns to come: from initial formation to long-term evolution. <i>Earth Surface Processes and Landforms</i> , 2014 , 39, 62-70	3.7	17
55	Geometric Constraints on Long-Term Barrier Migration: From Simple to Surprising 2018 , 211-241		17
54	Unraveling the dynamics that scale cross-shore headland relief on rocky coastlines: 2. Model predictions and initial tests. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014 , 119, 874-891	3.8	16
53	Sorted bed forms as self-organized patterns: 2. Complex forcing scenarios. <i>Journal of Geophysical Research</i> , 2007 , 112,		16

52	Process signatures in regional patterns of shoreline change on annual to decadal time scales. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	16
51	Modeling large-scale shoreline change caused by complex bathymetry in low-angle wave climates. <i>Marine Geology</i> , 2017 , 383, 55-64	3.3	15
50	Coastal vulnerability of a pinned, soft-cliff coastline [Part I: Assessing the natural sensitivity to wave climate. <i>Earth Surface Dynamics</i> , 2014 , 2, 295-308	3.8	15
49	Sorted bedform pattern evolution: Persistence, destruction and self-organized intermittency. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	15
48	Seeking explanation affects numerical modeling strategies. <i>Eos</i> , 2002 , 83, 418	1.5	13
47	Complex coastlines responding to climate change: Do shoreline shapes reflect present forcing or remember the distant past?. <i>Earth Surface Dynamics</i> , 2016 , 4, 871-884	3.8	13
46	Uncertainty quantification in modeling earth surface processes: more applicable for some types of models than for others. <i>Computers and Geosciences</i> , 2016 , 90, 6-16	4.5	11
45	Effects of Marsh Edge Erosion in Coupled Barrier Island-Marsh Systems and Geometric Constraints on Marsh Evolution. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018 , 123, 1218-1234	3.8	11
44	Ecohydrologic processes and soil thickness feedbacks control limestone-weathering rates in a karst landscape. <i>Chemical Geology</i> , 2019 , 527, 118774	4.2	10
43	Sea stack formation and the role of abrasion on beach-mantled headlands. <i>Earth Surface Processes and Landforms</i> , 2015 , 40, 559-568	3.7	10
42	Data-driven components in a model of inner-shelf sorted bedforms: a new hybrid model. <i>Earth Surface Dynamics</i> , 2014 , 2, 67-82	3.8	10
41	The Role of Ecomorphodynamic Feedbacks and Landscape Couplings in Influencing the Response of Barriers to Changing Climate 2018 , 305-336		10
40	Comparing the Cohesive Effects of Mud and Vegetation on Delta Evolution. <i>Geophysical Research Letters</i> , 2018 , 45, 10,437	4.9	10
39	Geometric scale invariance, genesis, and self-organization of polygonal fracture networks in granitic rocks. <i>Journal of Structural Geology</i> , 2012 , 42, 34-48	3	9
38	Rip channel development on nonbarred beaches: The importance of a lag in suspended-sediment transport. <i>Journal of Geophysical Research</i> , 2004 , 109,		8
37	Modeling long-term delta dynamics reveals persistent geometric river avulsion locations. <i>Earth and Planetary Science Letters</i> , 2021 , 559, 116786	5.3	8
36	Watershed and ocean controls of salt marsh extent and resilience. <i>Earth Surface Processes and Landforms</i> , 2020 , 45, 1456-1468	3.7	7
35	Mass balance implies Holocene development of a low-relief karst patterned landscape. <i>Chemical Geology</i> , 2019 , 527, 118782	4.2	7

34	Large-Scale Patterns in Hurricane-Driven Shoreline Change. <i>Geophysical Monograph Series</i> , 2012 , 127-138.	1	7
33	Quantification of fracture networks in non-layered, massive rock using synthetic and natural data sets. <i>Tectonophysics</i> , 2011 , 505, 44-56	3.1	7
32	Coastal vulnerability of a pinned, soft-cliff coastline, II: assessing the influence of sea walls on future morphology. <i>Earth Surface Dynamics</i> , 2014 , 2, 233-242	3.8	7
31	A Holistic Modeling Approach to Project the Evolution of Inlet-Interrupted Coastlines Over the 21st Century. <i>Frontiers in Marine Science</i> , 2020 , 7,	4.5	7
30	Ecohydrologic feedbacks controlling sizes of cypress wetlands in a patterned karst landscape. <i>Earth Surface Processes and Landforms</i> , 2019 , 44, 1178-1191	3.7	7
29	Geoengineering Coastlines? From Accidental to Intentional 2015 , 99-122		5
28	Twenty-first-century projections of shoreline change along inlet-interrupted coastlines. <i>Scientific Reports</i> , 2021 , 11, 14038	4.9	5
27	Dune Dynamics Drive Discontinuous Barrier Retreat. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL092958	4.5	4
26	Two Paradigms in Landscape Dynamics: Self-Similar Processes and Emergence 2007 , 17-35		4
25	From Strange Attractors to Real-World Data: Evaluating a Bedform Model by Measuring the Distance Between State-Space Plots. <i>Mathematical Geosciences</i> , 2001 , 33, 293-300		3
24	Data driven components in a model of inner shelf sorted bedforms: a new hybrid model		3
23	An Alternative Explanation for the Shape of 'Log-Spiral' Bays 2007 ,		3
22	Properties of a cellular braided-stream model 1997 , 22, 1001		3
21	Impacts of Seagrass Dynamics on the Coupled Long-Term Evolution of Barrier-Marsh-Bay Systems. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2020 , 125, e2019JG005416	3.7	2
20	Correlation Between Shoreline Change and Planform Curvature on Wave-Dominated, Sandy Coasts. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019 , 124, 3090-3106	3.8	2
19	DECADAL SCALE SHORELINE CHANGE ARISES FROM LARGE-SCALE INTERACTIONS, WHILE SMALL-SCALE CHANGES ARE FORGOTTEN: OBSERVATIONAL EVIDENCE 2015 ,		2
18	Rapid wetland expansion during European settlement and its implication for marsh survival under modern sediment delivery rates: REPLY. <i>Geology</i> , 2012 , 40, e286-e286	5	2
17	The Response of Spit Shapes to Wave-Angle Climates 2007 ,		2

16	Comment on On the development of large-scale cusped features on a semi-reflective beach: Carchuna beach, Southern Spain, by M. Ortega Sanchez, M.A. Losada and A. Baquerizo [Mar. Geol. 198 (2003) 209-223]. <i>Marine Geology</i> , 2004 , 206, 283-284	3.3	2
15	Assessing the natural morphological sensitivity of a pinned, soft-cliff, sandy coast to a changing wave climate		2
14	Probabilistic Application of an Integrated Catchment-Estuary-Coastal System Model to Assess the Evolution of Inlet-Interrupted Coasts Over the 21st Century. <i>Frontiers in Marine Science</i> , 2020 , 7,	4.5	2
13	Geoengineering Coastlines? From Accidental to Intentional. <i>SSRN Electronic Journal</i> , 2014 ,	1	1
12	Twenty years of nonlinear dynamics in geosciences. <i>Eos</i> , 2007 , 88, 29	1.5	1
11	Beach Nourishment as a Dynamic Capital Accumulation Problem. <i>SSRN Electronic Journal</i> , 2007 ,	1	1
10	Reply [to Numerical modeling strategies revisited] <i>Eos</i> , 2003 , 84, 100	1.5	1
9	Assessing the influence of sea walls on the coastal vulnerability of a pinned, soft-cliff, sandy coastline		1
8	Competition Among Limestone Depressions Leads to Self-Organized Regular Patterning on a Flat Landscape. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021 , 126, e2021JF006072	3.8	1
7	Morphodynamic Modeling of River-Dominated Deltas: A Review and Future Perspectives 2021 ,		1
6	Properties of a cellular braided-stream model 1997 , 22, 1001		1
5	Assessing Ability to Forecast Geomorphic System Responses to Climate and Land-Use Changes. <i>Eos</i> , 2014 , 95, 3-3	1.5	
4	The Influence of Tidal Prism and Vegetation on Tidal Channel Morphology: Implications for Marsh Stability 2007 , 1571		
3	Investigating Shoreface-Lithology Effects in a Process-Based Model of Coastline Change 2006 , 1		
2	Modeling Nearshore, Barrier, Cliff, and Coastline Morphodynamics 2021 ,		
1	Instability and finite-amplitude self-organization of large-scale coastline shapes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013 , 371, 20120363	3	