David C Mohrig

List of Publications by Year
in descending order

125 papers	7,433 citations	44069 48 h-index	56724 83 g-index
131 all docs	131 docs citations	131 times ranked	4828 citing authors

#	Article	IF	Citations
1	The â€œunreasonable effectivenessâ€•of stratigraphic and geomorphic experiments. Earth-Science Reviews, 2009, 97, 1-43.	9.1	399
2	Hydroplaning of subaqueous debris flows. Bulletin of the Geological Society of America, 1998, 110, 387-394.	3.3	339
3	Title is missing!. Bulletin of the Geological Society of America, 2000, 112, 1787.	3.3	324
4	Lateral accretion packages (LAPs): an important reservoir element in deep water sinuous channels. Marine and Petroleum Geology, 2003, 20, 631-648.	3.3	318
5	Natural Processes in Delta Restoration: Application to the Mississippi Delta. Annual Review of Marine Science, 2011, 3, 67-91.	11.6	246
6	Conditions for branching in depositional rivers. Geology, 2007, 35, 463.	4.4	236
7	Alluvial Fans Formed by Channelized Fluvial and Sheet Flow. I: Theory. Journal of Hydraulic Engineering, 1998, 124, 985-995.	1.5	201
8	Is It Feasible to Build New Land in the Mississippi River Delta?. Eos, 2009, 90, 373-374.	0.1	178
9	Compensational Stacking of Channelized Sedimentary Deposits. Journal of Sedimentary Research, 2009, 79, 673-688.	1.6	175
10	Spatial and temporal trends for water-flow velocity and bed-material sediment transport in the lower Mississippi River. Bulletin of the Geological Society of America, 2012, 124, 400-414.	3.3	167
11	Palaeohydraulics revisited: palaeoslope estimation in coarse-grained braided rivers. Basin Research, 1996, 8, 243-254.	2.7	165
12	Experiments on the relative mobility of muddy subaqueous and subaerial debris flows, and their capacity to remobilize antecedent deposits. Marine Geology, 1999, 154, 117-129.	2.1	163
13	Channel Dynamics, Sediment Transport, and the Slope of Alluvial Fans: Experimental Study. Journal of Geology, 1998, 106, 677-694.	1.4	158
14	Backwater and river plume controls on scour upstream of river mouths: Implications for fluvioâ€deltaic morphodynamics. Journal of Geophysical Research, 2012, 117, .	3.3	146
15	Spatial grain size sorting in eolian ripples and estimation of wind conditions on planetary surfaces: Application to Meridiani Planum, Mars. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	137
16	How do bedform patterns arise? New views on the role of bedform interactions within a set of boundary conditions. Earth Surface Processes and Landforms, 2010, 35, 51-63.	2.5	135
17	Constraining the efficiency of turbidity current generation from submarine debris flows and slides using laboratory experiments. Marine and Petroleum Geology, 2003, 20, 883-899.	3.3	127
18	Interactions between turbidity currents and topography in aggrading sinuous submarine channels: A laboratory study. Bulletin of the Geological Society of America, 2008, 120, 368-385.	3.3	123

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19	Do hyperpycnal-flow deposits record river-flood dynamics?. Geology, 2009, 37, 1067-1070.	4.4	122
20	Reconstructing relative flooding intensities responsible for hurricane-induced deposits from Laguna Playa Grande, Vieques, Puerto Rico. Geology, 2008, 36, 391.	4.4	106
21	The importance of erosion in distributary channel network growth, Wax Lake Delta, Louisiana, USA. Geology, 2014, 42, 31-34.	4.4	102
22	A unified model for subaqueous bed form dynamics. Water Resources Research, 2005, 41, .	4.2	101
23	A minimum time for the formation of Holden Northeast fan, Mars. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	90
24	The morphology and evolution of channels on the Wax Lake Delta, Louisiana, USA. Journal of Geophysical Research F: Earth Surface, 2013, 118, 1562-1584.	2.8	90
25	Growth laws for channel networks incised byÂgroundwater flow. Nature Geoscience, 2009, 2, 193-196.	12.9	88
26	Experimental Stratigraphy. GSA Today, 2001, 11, 4.	2.0	86
27	The lowermost Mississippi River: a mixed bedrockâ€alluvial channel. Sedimentology, 2011, 58, 1914-1934.	3.1	84
28	Toward a unified science of the Earth's surface: Opportunities for synthesis among hydrology, geomorphology, geochemistry, and ecology. Water Resources Research, 2006, 42, .	4.2	83
29	Stratigraphy and paleohydrology of delta channel deposits, Jezero crater, Mars. Icarus, 2018, 301, 58-75.	2.5	83
30	Emplacement of massive turbidites linked to extinction of turbulence in turbidity currents. Nature Geoscience, 2012, 5, 42-45.	12.9	81
31	Linking river-flood dynamics to hyperpycnal-plume deposits: Experiments, theory, and geological implications. Bulletin of the Geological Society of America, 2010, 122, 1389-1400.	3.3	79
32	Nature of deformation of sandy bed forms. Journal of Geophysical Research, 2009, 114, .	3.3	71
33	Predicting the migration rates of subaqueous dunes. Water Resources Research, 1996, 32, 3207-3217.	4.2	70
34	Sublacustrine depositional fans in southwest Melas Chasma. Journal of Geophysical Research, 2009, 114, .	3.3	68
35	Topset-dominated deltas: A new model for river delta stratigraphy. Geology, 2011, 39, 1175-1178.	4.4	68
36	Punctuated sand transport in the lowermost Mississippi River. Journal of Geophysical Research, 2011, 116, .	3.3	67

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37	Connecting the backwater hydraulics of coastal rivers to fluvio-deltaic sedimentology and stratigraphy. Geology, 2016, 44, 979-982.	4.4	65
38	Time Not Our Time: Physical Controls on the Preservation and Measurement of Geologic Time. Annual Review of Earth and Planetary Sciences, 2018, 46, 409-438.	11.0	65
39	Flow patterns and morphology of a prograding river delta. Journal of Geophysical Research F: Earth Surface, 2016, 121, 372-391.	2.8	64
40	Methodology for reconstructing wind direction, wind speed and duration of wind events from aeolian crossâ€strata. Journal of Geophysical Research, 2012, 117, .	3.3	61
41	Quantifying the influence of channel sinuosity on the depositional mechanics of channelized turbidity currents: A laboratory study. Marine and Petroleum Geology, 2011, 28, 744-760.	3.3	60
42	Hydroplaning of subaqueous debris flows and glide blocks: Analytical solutions and discussion. Journal of Geophysical Research, 2003, 108, .	3.3	54
43	Deep turbidity currents in shallow channels. Geology, 2007, 35, 155.	4.4	54
44	Erosive dynamics of channels incised by subsurface water flow. Journal of Geophysical Research, 2007, 112, .	3.3	54
45	Carving intracrater layered deposits with wind on Mars. Geophysical Research Letters, 2016, 43, 2473-2479.	4.0	51
46	Alluvial Fans Formed by Channelized Fluvial and Sheet Flow. II: Application. Journal of Hydraulic Engineering, 1998, 124, 996-1004.	1.5	49
47	Frozen dynamics of migrating bedforms. Geology, 2005, 33, 57.	4.4	49
48	Quantifying the morphology and growth of levees in aggrading submarine channels. Journal of Geophysical Research, 2008, 113, .	3.3	49
49	Constructional Canyons Built by Sheet-Like Turbidity Currents: Observations from Offshore Brunei Darussalam. Journal of Sedimentary Research, 2009, 79, 24-39.	1.6	49
50	Channel-like features created by erosive submarine debris flows: Field evidence from the Middle Eocene Ainsa Basin, Spanish Pyrenees. Marine and Petroleum Geology, 2013, 41, 62-71.	3.3	49
51	Fluvial stratigraphy of valley fills at Aeolis Dorsa, Mars: Evidence for base-level fluctuations controlled by a downstream water body. Bulletin of the Geological Society of America, 2018, 130, 484-498.	3.3	44
52	Mudflow transport behavior and deposit morphology: Role of shear stress to yield strength ratio in subaqueous experiments. Marine Geology, 2012, 307-310, 28-39.	2.1	43
53	Estimation of the paleoflux of terrestrial-derived solids across ancient basin margins using the stratigraphic record. Bulletin of the Geological Society of America, 2013, 125, 578-593.	3.3	41
54	Definition and origin of the dune-field pattern at White Sands, New Mexico. Aeolian Research, 2014, 15, 269-287.	2.7	41

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55	Carbon storage in the Mississippi River delta enhanced by environmental engineering. Nature Geoscience, 2017, 10, 846-851.	12.9	41
56	Numerical modeling of flow and bed evolution in meandering submarine channels. Journal of Geophysical Research, 2004, 109, .	3.3	39
57	Interactions between bed forms: Topography, turbulence, and transport. Journal of Geophysical Research, 2005, 110, .	3.3	38
58	On the Dynamics of Subaqueous Debris Flows. Oceanography, 2000, 13, 109-117.	1.0	36
59	Geomorphic signature of a dammed Sandy River: The lower Trinity River downstream of Livingston Dam in Texas, USA. Geomorphology, 2017, 297, 122-136.	2.6	34
60	Influence of growth faults on coastal fluvial systems: Examples from the late Miocene to Recent Mississippi River Delta. Sedimentary Geology, 2014, 301, 120-132.	2.1	33
61	Elevation change and stability on a prograding delta. Geophysical Research Letters, 2017, 44, 1786-1794.	4.0	33
62	Ripple Effects: Bed Form Morphodynamics Cascading Into Hyporheic Zone Biogeochemistry. Water Resources Research, 2019, 55, 7320-7342.	4.2	32
63	Statistical Characterization of Grain-Size Distributions in Sandy Fluvial Systems. Journal of Sedimentary Research, 2010, 80, 184-192.	1.6	31
64	Paleoslope Reconstruction In Sandy Suspended-Load-Dominant Rivers. Journal of Sedimentary Research, 2014, 84, 825-836.	1.6	30
65	Tracking hurricane-generated storm surge with washover fan stratigraphy. Geology, 2015, 43, 127-130.	4.4	29
66	Response of fluvial, aeolian, and lacustrine systems to late Pleistocene to Holocene climate change, Lower Moravian Basin, Czech Republic. Geomorphology, 2015, 232, 193-208.	2.6	28
67	Airborne radar imaging of subaqueous channel evolution in Wax Lake Delta, Louisiana, USA. Geophysical Research Letters, 2016, 43, 5035-5042.	4.0	27
68	Dune deformation in a multiâ€directional wind regime: White Sands Dune Field, New Mexico. Earth Surface Processes and Landforms, 2015, 40, 925-941.	2.5	26
69	Universal relation with regime transition for sediment transport in fine-grained rivers. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 171-176.	7.1	26
70	Deep-water depositional systems supplied by shelf-incising submarine canyons: Recognition and significance in the geologic record. Earth-Science Reviews, 2021, 214, 103531.	9.1	26
71	Cost analysis of water and sediment diversions to optimize land building in the Mississippi River delta. Water Resources Research, 2013, 49, 3388-3405.	4.2	25
72	The role of buoyancy reversal in turbidite deposition and submarine fan geometry. Geology, 2017, 45, 35-38.	4.4	24

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73	Deltaic deposits indicative of a paleo-coastline at Aeolis Dorsa, Mars. Icarus, 2019, 317, 442-453.	2.5	24
74	Differential bank migration and the maintenance of channel width in meandering river bends. Geology, 2019, 47, 1136-1140.	4.4	23
75	The anatomy of exhumed riverâ€channel belts: Bedform to beltâ€scale river kinematics of the Ruby Ranch Member, Cretaceous Cedar Mountain Formation, Utah, USA. Sedimentology, 2020, 67, 3655-3682.	3.1	23
76	Experimental tsunami deposits: Linking hydrodynamics to sediment entrainment, advection lengths and downstream fining. Geomorphology, 2016, 253, 478-490.	2.6	21
77	Using Timeâ€Lapse Lidar to Quantify River Bend Evolution on the Meandering Coastal Trinity River, Texas, USA. Journal of Geophysical Research F: Earth Surface, 2018, 123, 1133-1144.	2.8	21
78	Dynamics of dilative slope failure. Geology, 2012, 40, 663-666.	4.4	20
79	Aeolian dune sediment flux variability over an annual cycle of wind. Sedimentology, 2016, 63, 1753-1764.	3.1	20
80	Incision of paleolake outlet canyons on Mars from overflow flooding. Geology, 2019, 47, 7-10.	4.4	20
81	Deep-ocean seafloor islands of plastics. Science, 2020, 368, 1055-1055.	12.6	20
82	Autogenic translation and counter point bar deposition in meandering rivers. Bulletin of the Geological Society of America, 2021, 133, 2439-2456.	3.3	20
83	Channel network scaling laws in submarine basins. Geophysical Research Letters, 2007, 34, .	4.0	18
84	Bedform spurs: a result of a trailing helical vortex wake. Sedimentology, 2018, 65, 191-208.	3.1	18
85	Scroll bars are inner bank levees along meandering river bends. Earth Surface Processes and Landforms, 2019, 44, 2649-2659.	2.5	18
86	The Influence of Transport Fluctuations on Spatially Averaged Topography on a Sandy, Braided Fluvial Fan. , 1999, , .		18
87	Subsurface and outcrop characteristics of fluvialâ€dominated deepâ€lacustrine clinoforms. Sedimentology, 2018, 65, 1447-1481.	3.1	17
88	Transfer Entropy as a Tool for Hydrodynamic Model Validation. Entropy, 2018, 20, 58.	2.2	17
89	Inferring surface currents within submerged, vegetated deltaic islands and wetlands from multi-pass airborne SAR. Remote Sensing of Environment, 2018, 212, 148-160.	11.0	16
90	Preservation of Autogenic Processes and Allogenic Forcings in Set-Scale Aeolian Architecture I: Numerical Experiments. Journal of Sedimentary Research, 2019, 89, 728-740.	1.6	16

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91	Preservation of Autogenic Processes and Allogenic Forcings in Set-Scale Aeolian Architecture II: The Scour-and-Fill Dominated Jurassic Page Sandstone, Arizona, U.S.A.. Journal of Sedimentary Research, 2019, 89, 741-760.	1.6	16
92	Reachâ€scale changes in channel geometry and dynamics due to the coastal backwater effect: the lower Trinity River, Texas. Earth Surface Processes and Landforms, 2020, 45, 565-573.	2.5	14
93	Architecture of an Aggradational Tributary Submarine-Channel Network on the Continental Slope Offshore Brunei Darussalam. , 2012, , 13-30.		14
94	Formation of Precambrian sediment ripples. Nature, 2005, 436, E1-E1.	27.8	13
95	Factors Controlling Storage, Sources, and Diagenetic State of Organic Carbon in a Prograding Subaerial Delta: Wax Lake Delta, Louisiana. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1115-1131.	3.0	12
96	Bidirectional Riverâ€Floodplain Connectivity During Combined Pluvialâ€Fluvial Events. Water Resources Research, 2022, 58, .	4.2	12
97	A Surface Model for Aeolian Dune Topography. Mathematical Geosciences, 2017, 49, 635-655.	2.4	11
98	Mechanics of dual-mode dilative failure in subaqueous sediment deposits. Earth and Planetary Science Letters, 2014, 397, 10-18.	4.4	9
99	Antecedent aeolian dune topographic control on carbonate and evaporite facies: Middle Jurassic Todilto Member, Wanakah Formation, Ghost Ranch, New Mexico, USA. Sedimentology, 2019, 66, 808-837.	3.1	9
100	Flow and Sediment Flux Asymmetry in a Branching Channel Delta. Water Resources Research, 2019, 55, 9563-9577.	4.2	9
101	Internal connectivity of meandering rivers: Statistical generalization of channel hydraulic geometry. Water Resources Research, 2015, 51, 7485-7500.	4.2	7
102	Addressing time-scaleâ€“dependent erosion rates from measurement methods with censorship. Bulletin of the Geological Society of America, 2018, 130, 381-395.	3.3	7
103	Sandâ€“mud couplets deposited by spontaneous remobilization of subaqueous transitional flows. Sedimentology, 2020, 67, 78-95.	3.1	7
104	The effect of flood intermittency on bifurcations in fluviodeltaic systems: Experiment and theory. Sedimentology, 2020, 67, 3055-3066.	3.1	7
105	Flow substrate interactions in aggrading and degrading submarine channels. Journal of Sedimentary Research, 2020, 90, 573-583.	1.6	7
106	Sand on salt: Controls on dune subsidence and determining salt substrate thickness. Lithosphere, 2014, 6, 195-199.	1.4	6
107	Depositional settings and history of the Lower Miocene Fleming Group, Refugio County, Texas, as defined using seismic geomorphology. Marine and Petroleum Geology, 2018, 92, 565-581.	3.3	6
108	Tributary channel networks formed by depositional processes. Nature Geoscience, 2022, 15, 216-221.	12.9	6

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109	Acoustic Imaging Of Experimental Subaqueous Sediment-Laden Flows And Their Deposits. Journal of Sedimentary Research, 2014, 85, 1-5.	1.6	5
110	Studies of Mass-Movement Processes on Submarine Slopes. Oceanography, 1996, 9, 168-172.	1.0	5
111	Channel trajectories control deepâ€water stratigraphic architecture. Depositional Record, 2022, 8, 880-894.	1.7	5
112	Experimental Investigations of Combined Flow Sediment Transport. Journal of Sedimentary Research, 2019, 89, 808-814.	1.6	4
113	Quantifying Coastal Fluvial Morphodynamics Over the Last 100ÂYears on the Lower Rio Grande, USA and Mexico. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005443.	2.8	4
114	Pattern evolution and interactions in subaqueous dune fields: North Loup River, Nebraska, U.S.A.. Journal of Sedimentary Research, 2020, 90, 1734-1746.	1.6	4
115	Inundation Model As an Aid for Predicting Ecological Succession on Newly-Created Deltaic Land Associated with Mississippi River Diversions: Application to the Wax Lake Delta. , 2011, , .		3
116	Modern coastal tempestite deposition by a nonâ€local storm: Swellâ€generated transport of sand and boulders on Eleuthera, The Bahamas. Sedimentology, 2021, 68, 2043-2068.	3.1	3
117	Coriolis effect recorded in Late Pleistocene Marine Isotope Stage 5e Bahamian aeolianites. Geology, 2022, 50, 567-571.	4.4	3
118	A multi-proxy assessment of terrace formation in the lower Trinity River valley, Texas. Earth Surface Dynamics, 2022, 10, 635-651.	2.4	3
119	Vapor deposition in basaltic stalactites, Kilauea, Hawaii. Lithos, 1985, 18, 151-160.	1.4	2
120	Correction to â€œNature of deformation of sandy bed formsâ€. Journal of Geophysical Research, 2012, 117, n/a-n/a.	3.3	1
121	How heterogeneity in the shear dilation of a deposit controls the mechanics of breaching slope failure. Journal of Geophysical Research F: Earth Surface, 2014, 119, 2381-2395.	2.8	1
122	The Oligoceneâ€Miocene Guadalopeâ€Matarranya Fan, Spain, as an Analog for Longâ€Lived, Ridgeâ€Bearing Megafans on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2021JE006993.	3.6	1
123	The Effect of Remote Sensing Resolution Limits on Aeolian Sandstone Measurements and the Reconstruction of Ancient Dune Fields on Mars: Numerical Experiment Using the Page Sandstone, Earth. Journal of Geophysical Research E: Planets, 2019, 124, 3244-3256.	3.6	0
124	Short-Term Ecogeomorphic Evolution of a Fluvial Delta from Hindcasting Intertidal Marsh-Top Elevations (HIME). Remote Sensing, 2020, 12, 1517.	4.0	0
125	The effects of storms and a transient sandy veneer on the interannual planform evolution of a low-relief coastal cliff and shore platform at Sargent Beach, Texas, USA. Earth Surface Dynamics, 2021, 9, 1111-1123.	2.4	0