

David M Rubin

List of Publications by Year in descending order

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83
papers

7,827
citations

50244

46
h-index

58549

82
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95
docs citations

95
times ranked

4792
citing authors

#	ARTICLE	IF	CITATIONS
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1242777.	6.0	687
2	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1243480.	6.0	508
3	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. <i>Science</i> , 2015, 350, aac7575.	6.0	471
4	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. <i>Science</i> , 2013, 341, 263-266.	6.0	327
5	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	6.0	326
6	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1245267.	6.0	323
7	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. <i>Science</i> , 2013, 341, 1239505.	6.0	280
8	Bedform Alignment in Directionally Varying Flows. <i>Science</i> , 1987, 237, 276-278.	6.0	256
9	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	6.0	246
10	Bedform climbing in theory and nature. <i>Sedimentology</i> , 1982, 29, 121-138.	1.6	238
11	In Situ Radiometric and Exposure Age Dating of the Martian Surface. <i>Science</i> , 2014, 343, 1247166.	6.0	224
12	Colorado River sediment transport: 1. Natural sediment supply limitation and the influence of Glen Canyon Dam. <i>Water Resources Research</i> , 2000, 36, 515-542.	1.7	219
13	Single and superimposed bedforms: a synthesis of San Francisco Bay and flume observations. <i>Sedimentary Geology</i> , 1980, 26, 207-231.	1.0	215
14	A Simple Autocorrelation Algorithm for Determining Grain Size from Digital Images of Sediment. <i>Journal of Sedimentary Research</i> , 2004, 74, 160-165.	0.8	182
15	Flume experiments on the alignment of transverse, oblique, and longitudinal dunes in directionally varying flows. <i>Sedimentology</i> , 1990, 37, 673-684.	1.6	145
16	Large wind ripples on Mars: A record of atmospheric evolution. <i>Science</i> , 2016, 353, 55-58.	6.0	144
17	Ancient Martian aeolian processes and palaeomorphology reconstructed from the Stimson formation on the lower slope of Aeolis Mons, Gale crater, Mars. <i>Sedimentology</i> , 2018, 65, 993-1042.	1.6	143
18	Why deposits of longitudinal dunes are rarely recognized in the geologic record. <i>Sedimentology</i> , 1985, 32, 147-157.	1.6	131

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19	Bed roughness produced by saltating sediment. <i>Journal of Geophysical Research</i> , 1989, 94, 5011-5016.	3.3	121
20	Multiple origins of linear dunes on Earth and Titan. <i>Nature Geoscience</i> , 2009, 2, 653-658.	5.4	112
21	Suspended-sediment rating curve response to urbanization and wildfire, Santa Ana River, California. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	91
22	Estimating accumulation rates and physical properties of sediment behind a dam: Englebright Lake, Yuba River, northern California. <i>Water Resources Research</i> , 2004, 40, .	1.7	86
23	Sedimentary processes of the Bagnold Dunes: Implications for the eolian rock record of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 2544-2573.	1.5	83
24	Mars Science Laboratory Curiosity Rover Megaripple Crossings up to Sol 710 in Gale Crater. <i>Journal of Field Robotics</i> , 2017, 34, 495-518.	3.2	82
25	Evidence for plunging river plume deposits in the Pahrump Hills member of the Murray formation, Gale crater, Mars. <i>Sedimentology</i> , 2019, 66, 1768-1802.	1.6	80
26	Giant sand waves at the mouth of San Francisco Bay. <i>Eos</i> , 2006, 87, 285.	0.1	79
27	Cobble cam: grain-size measurements of sand to boulder from digital photographs and autocorrelation analyses. <i>Earth Surface Processes and Landforms</i> , 2009, 34, 1811-1821.	1.2	71
28	A universal approximation of grain size from images of noncohesive sediment. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	71
29	Regulated streamflow, fine-grained deposits, and effective discharge in canyons with abundant debris fans. <i>Geophysical Monograph Series</i> , 1995, , 177-195.	0.1	69
30	Evidence for a Diagenetic Origin of Vera Rubin Ridge, Gale Crater, Mars: Summary and Synthesis of Curiosity's Exploration Campaign. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006527.	1.5	69
31	A Lacustrine Paleoenvironment Recorded at Vera Rubin Ridge, Gale Crater: Overview of the Sedimentology and Stratigraphy Observed by the Mars Science Laboratory Curiosity Rover. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006307.	1.5	69
32	MAHLI at the Rocknest sand shadow: Science and science-enabling activities. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 2338-2360.	1.5	67
33	Flume simulation of recirculating flow and sedimentation. <i>Water Resources Research</i> , 1993, 29, 2925-2939.	1.7	66
34	Colorado River sediment transport: 2. Systematic Bed-elevation and grain-size effects of sand supply limitation. <i>Water Resources Research</i> , 2000, 36, 543-570.	1.7	66
35	Relation of inversely graded deposits to suspended-sediment grain-size evolution during the 1996 flood experiment in Grand Canyon. <i>Geology</i> , 1998, 26, 99.	2.0	64
36	Quantifying the relative importance of flow regulation and grain size regulation of suspended sediment transport ¹ and tracking changes in grain size of bed sediment ² . <i>Water Resources Research</i> , 2001, 37, 133-146.	1.7	63

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37	A unifying model for planform straightness of ripples and dunes in air and water. <i>Earth-Science Reviews</i> , 2012, 113, 176-185.	4.0	63
38	Shaler: <i>in situ</i> analysis of a fluvial sedimentary deposit on Mars. <i>Sedimentology</i> , 2018, 65, 96-122.	1.6	59
39	Morphologic Diversity of Martian Ripples: Implications for Large-Ripple Formation. <i>Geophysical Research Letters</i> , 2018, 45, 10,229.	1.5	59
40	Sulfate-Rich Eolian and Wet Interdune Deposits, Erebus Crater, Meridiani Planum, Mars. <i>Journal of Sedimentary Research</i> , 2009, 79, 247-264.	0.8	57
41	Comparing orbiter and rover image-based mapping of an ancient sedimentary environment, Aeolis Palus, Gale crater, Mars. <i>Icarus</i> , 2016, 280, 3-21.	1.1	57
42	Field test comparison of an autocorrelation technique for determining grain size using a digital "beachball" camera versus traditional methods. <i>Sedimentary Geology</i> , 2007, 201, 180-195.	1.0	56
43	Recent sediment studies refute Glen Canyon Dam Hypothesis. <i>Eos</i> , 2002, 83, 273.	0.1	55
44	Use of forecasting signatures to help distinguish periodicity, randomness, and chaos in ripples and other spatial patterns. <i>Chaos</i> , 1992, 2, 525-535.	1.0	52
45	The Bagnold Dunes in Southern Summer: Active Sediment Transport on Mars Observed by the Curiosity Rover. <i>Geophysical Research Letters</i> , 2018, 45, 8853-8863.	1.5	50
46	A second look at western Sinai seif dunes and their lateral migration. <i>Geomorphology</i> , 2008, 93, 335-342.	1.1	47
47	Interpreting Cyclic Crossbedding, with An Example from the Navajo Sandstone. <i>Developments in Sedimentology</i> , 1983, , 429-454.	0.5	46
48	Underwater microscope for measuring spatial and temporal changes in bed-sediment grain size. <i>Sedimentary Geology</i> , 2007, 202, 402-408.	1.0	45
49	Lateral migration of linear dunes in the Strzelecki desert, Australia. <i>Earth Surface Processes and Landforms</i> , 1990, 15, 1-14.	1.2	44
50	A Rock Record of Complex Aeolian Bedforms in a Hesperian Desert Landscape: The Stimson Formation as Exposed in the Murray Buttes, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006554.	1.5	34
51	Currents, drag, and sediment transport induced by a tsunami. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	30
52	Reconstructing depositional processes and history from reservoir stratigraphy: Englebright Lake, Yuba River, northern California. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	27
53	Is there enough sand? Evaluating the fate of Grand Canyon sandbars. <i>GSA Today</i> , 2008, 18, 4.	1.1	27
54	Using nonlinear forecasting to learn the magnitude and phasing of time-varying sediment suspension in the surf zone. <i>Journal of Geophysical Research</i> , 1996, 101, 14283-14296.	3.3	26

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55	Bed forms created by simulated waves and currents in a large flume. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	26
56	Building Sandbars in the Grand Canyon. <i>Eos</i> , 2015, 96, .	0.1	26
57	Intermittently emergent shelf carbonates: an example from the Cambro-Ordovician of eastern New York State. <i>Sedimentary Geology</i> , 1977, 19, 81-106.	1.0	25
58	Coupled changes in sand grain size and sand transport driven by changes in the upstream supply of sand in the Colorado River: Relative importance of changes in bed-sand grain size and bed-sand area. <i>Sedimentary Geology</i> , 2007, 202, 538-561.	1.0	25
59	Application of sedimentary-structure interpretation to geoarchaeological investigations in the Colorado River Corridor, Grand Canyon, Arizona, USA. <i>Geomorphology</i> , 2008, 101, 497-509.	1.1	23
60	Linkage between grain-size evolution and sediment depletion during Colorado River floods. <i>Geophysical Monograph Series</i> , 1999, , 71-98.	0.1	22
61	An approach for modeling sediment budgets in supply-limited rivers. <i>Water Resources Research</i> , 2010, 46, .	1.7	22
62	Factors determining desert dune type. <i>Nature</i> , 1984, 309, 91-92.	13.7	21
63	Nonperiodic Eddy Pulsations. <i>Water Resources Research</i> , 1995, 31, 1595-1605.	1.7	20
64	Complex bedding geometry in the upper portion of Aeolis Mons, Gale crater, Mars. <i>Icarus</i> , 2018, 314, 246-264.	1.1	20
65	Ripple effect: Unforeseen applications of sand studies. <i>Eos</i> , 2006, 87, 293.	0.1	18
66	Fluidized-sediment pipes in Gale crater, Mars, and possible Earth analogs. <i>Geology</i> , 2017, 45, 7-10.	2.0	18
67	Orbital and In-situ Investigation of Periodic Bedrock Ridges in Glen Torridon, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	18
68	Stratigraphic Architecture of Bedrock Reference Section, Victoria Crater, Meridiani Planum, Mars. , 2012, , 195-209.		16
69	Regulation of sand transport in the Colorado River by changes in the surface grain size of eddy sandbars over multi-year timescales. <i>Sedimentology</i> , 2005, 52, 1133-1153.	1.6	15
70	Assessment of Aeolis Palus stratigraphic relationships based on bench-forming strata in the Kylie and the Kimberley regions of Gale crater, Mars. <i>Icarus</i> , 2018, 309, 84-104.	1.1	15
71	Assessing Grain-Size Correspondence Between Flow and Deposits of Controlled Floods In the Colorado River, U.S.A. <i>Journal of Sedimentary Research</i> , 2013, 83, 962-973.	0.8	13
72	Autonomous bed-sediment imaging-systems for revealing temporal variability of grain size. <i>Limnology and Oceanography: Methods</i> , 2014, 12, 390-406.	1.0	12

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73	Centimeter to decimeter hollow concretions and voids in Gale Crater sediments, Mars. <i>Icarus</i> , 2017, 289, 144-156.	1.1	12
74	Origin and lateral migration of linear dunes in the Qaidam Basin of NW China revealed by dune sediments, internal structures, and optically stimulated luminescence ages, with implications for linear dunes on Titan: Discussion. <i>Bulletin of the Geological Society of America</i> , 2013, 125, 1943-1946.	1.6	11
75	Advances in the simulation and automated measurement of well-sorted granular material: 2. Direct measures of particle properties. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	7
76	Causes of Variability in Suspended Sand Concentration Evaluated Using Measurements in the Colorado River in Grand Canyon. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020, 125, e2019JF005226.	1.0	7
77	Ancient Winds, Waves, and Atmosphere in Gale Crater, Mars, Inferred From Sedimentary Structures and Wave Modeling. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	7
78	Advances in the simulation and automated measurement of well-sorted granular material: 1. Simulation. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	5
79	Forecasting Techniques, Underlying Physics, and Applications. , 1995, , 85-120.		5
80	Formation of Scalloped Cross-Bedding Without Unsteady Flows. <i>Journal of Sedimentary Research</i> , 1987, Vol. 57, .	0.8	4
81	Summary of the Third International Planetary Dunes Workshop: Remote Sensing and Image Analysis of Planetary Dunes, Flagstaff, Arizona, USA, June 12-15, 2012. <i>Aeolian Research</i> , 2013, 8, 29-38.	1.1	3
82	Burial and Exhumation of Sedimentary Rocks Revealed by the Base Stimson Erosional Unconformity, Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	1.5	3
83	A ROCK RECORD OF COMPLEX AEOLIAN BEDFORMS IN A HESPERIAN DESERT LANDSCAPE:THE STIMSON FORMATION AS EXPOSED IN THE MURRAY BUTTES, GALE CRATER, MARS. , 2020, , .		1