

# Michael Lamb

## List of Publications by Year in descending order

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129  
papers

7,213  
citations

41344

49  
h-index

62596

80  
g-index

133  
all docs

133  
docs citations

133  
times ranked

4846  
citing authors

#	ARTICLE	IF	CITATIONS
1	Suspended Sediment-Induced Stratification Inferred From Concentration and Velocity Profile Measurements in the Lower Yellow River, China. <i>Water Resources Research</i> , 2022, 58, e2020WR027192.	4.2	7
2	Morphodynamic Modeling of River-Dominated Deltas: A Review and Future Perspectives. , 2022, , 110-140.		2
3	Evaluating the role of volatiles in bedrock chute formation on the Moon and Mars. <i>Icarus</i> , 2022, 373, 114774.	2.5	3
4	Formation of low-gradient bedrock chutes by dry rockfall on planetary surfaces. <i>Geology</i> , 2022, 50, 174-178.	4.4	3
5	Canyon Wall and Floor Debris Deposits in Aeolis Mons, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	2
6	Glacial isostatic adjustment directed incision of the Channeled Scabland by Ice Age megafloods. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	4
7	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, .	3.6	7
8	Organic carbon burial by river meandering partially offsets bank erosion carbon fluxes in a discontinuous permafrost floodplain. <i>Earth Surface Dynamics</i> , 2022, 10, 421-435.	2.4	12
9	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, .	3.6	18
10	Spatial Patterns of Deltaic Deposition/Erosion Revealed by Streaklines Extracted From Remotely-Sensed Suspended Sediment Concentration. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	4
11	Where rivers jump course. <i>Science</i> , 2022, 376, 987-990.	12.6	22
12	Amplification of downstream flood stage due to damming of fine-grained rivers. <i>Nature Communications</i> , 2022, 13, .	12.8	18
13	Effect of Sea-Level Change on River Avulsions and Stratigraphy for an Experimental Lowland Delta. <i>Journal of Geophysical Research F: Earth Surface</i> , 2022, 127, .	2.8	5
14	Early plant organics increased global terrestrial mud deposition through enhanced flocculation. <i>Science</i> , 2021, 371, 526-529.	12.6	28
15	Debris flow initiation from ravel-filled channel bed failure following wildfire in a bedrock landscape with limited sediment supply. <i>Bulletin of the Geological Society of America</i> , 2021, 133, 2079-2096.	3.3	15
16	An Evolving Understanding of Enigmatic Large Ripples on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006729.	3.6	21
17	Similar curvature-to-width ratios for channels and channel belts: Implications for paleo-hydraulics of fluvial ridges on Mars. <i>Geology</i> , 2021, 49, 837-841.	4.4	8
18	Mass balance controls on sediment scour and bedrock erosion in waterfall plunge pools. <i>Geology</i> , 2021, 49, 1084-1088.	4.4	4

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19	Organic sulfur fluxes and geomorphic control of sulfur isotope ratios in rivers. <i>Earth and Planetary Science Letters</i> , 2021, 562, 116838.	4.4	9
20	Coal fly ash is a major carbon flux in the Chang Jiang (Yangtze River) basin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	7
21	Climate Change Controls on River Delta Avulsion Location and Frequency. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2020JF005950.	2.8	11
22	Constraining the Timespan of Fluvial Activity From the Intermittency of Sediment Transport on Earth and Mars. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL092598.	4.0	13
23	Impact of River Channel Lateral Migration on Microbial Communities across a Discontinuous Permafrost Floodplain. <i>Applied and Environmental Microbiology</i> , 2021, 87, e0133921.	3.1	3
24	The Oligocene–Miocene Guadalope–Matarranya Fan, Spain, as an Analog for Long-Lived, Ridge-Bearing Megafans on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006993.	3.6	1
25	Universal relation with regime transition for sediment transport in fine-grained rivers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 171-176.	7.1	26
26	Flood Variability Determines the Location of Lobe-Scale Avulsions on Deltas: Madagascar. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088797.	4.0	10
27	Ooid Cortical Stratigraphy Reveals Common Histories of Individual Co-occurring Sedimentary Grains. <i>Journal of Geophysical Research F: Earth Surface</i> , 2020, 125, e2019JF005452.	2.8	10
28	Accelerated river avulsion frequency on lowland deltas due to sea-level rise. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 17584-17590.	7.1	38
29	Fluvial Sinuous Ridges of the Morrison Formation, USA: Meandering, Scarp Retreat, and Implications for Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006470.	3.6	15
30	Decreasing Landslide Erosion on Steeper Slopes in Soil-Mantled Landscapes. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087505.	4.0	24
31	Entrainment and suspension of sand and gravel. <i>Earth Surface Dynamics</i> , 2020, 8, 485-504.	2.4	32
32	Mud in rivers transported as flocculated and suspended bed material. <i>Nature Geoscience</i> , 2020, 13, 566-570.	12.9	55
33	Dry sediment loading of headwater channels fuels post-wildfire debris flows in bedrock landscapes. <i>Geology</i> , 2020, 48, 189-193.	4.4	34
34	Long-Term Storage and Age-Biased Export of Fluvial Organic Carbon: Field Evidence From West Iceland. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008632.	2.5	14
35	Modeling Deltaic Lobe-Building Cycles and Channel Avulsions for the Yellow River Delta, China. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019, 124, 2438-2462.	2.8	30
36	Model for the Formation of Single-Thread Rivers in Barren Landscapes and Implications for Pre-Silurian and Martian Fluvial Deposits. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019, 124, 2757-2777.	2.8	35

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37	Cosmogenic <sup>3</sup> He production rate in ilmenite and the redistribution of spallation <sup>3</sup> He in fine-grained minerals. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 265, 19-31.	3.9	4
38	Autogenic Erosional Surfaces in Fluvio-deltaic Stratigraphy from Floods, Avulsions, and Backwater Hydrodynamics. <i>Journal of Sedimentary Research</i> , 2019, 89, 815-832.	1.6	29
39	A physical model of the high-frequency seismic signal generated by debris flows. <i>Earth Surface Processes and Landforms</i> , 2019, 44, 2529-2543.	2.5	51
40	Origin of a Preferential Avulsion Node on Lowland River Deltas. <i>Geophysical Research Letters</i> , 2019, 46, 4267-4277.	4.0	39
41	Low-gradient, single-threaded rivers prior to greening of the continents. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 11652-11657.	7.1	42
42	Formation of sinuous ridges by inversion of river-channel belts in Utah, USA, with implications for Mars. <i>Icarus</i> , 2019, 332, 92-110.	2.5	50
43	Self-formed bedrock waterfalls. <i>Nature</i> , 2019, 567, 229-233.	27.8	33
44	The Origin of Carbonate Mud. <i>Geophysical Research Letters</i> , 2019, 46, 2696-2703.	4.0	24
45	Particle transport mechanics and induced seismic noise in steep flume experiments with accelerometer-embedded tracers. <i>Earth Surface Processes and Landforms</i> , 2019, 44, 219-241.	2.5	44
46	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.	3.1	80
47	Similarity of stream width distributions across headwater systems. <i>Nature Communications</i> , 2018, 9, 610.	12.8	64
48	The Role of Three-Dimensional Boundary Stresses in Limiting the Occurrence and Size of Experimental Landslides. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 46-65.	2.8	11
49	Erosional surfaces in the Upper Cretaceous Castlegate Sandstone (Utah, USA): Sequence boundaries or autogenic scour from backwater hydrodynamics?. <i>Geology</i> , 2018, 46, 707-710.	4.4	31
50	Active Ooid Growth Driven By Sediment Transport in a High-Energy Shoal, Little Ambergris Cay, Turks and Caicos Islands. <i>Journal of Sedimentary Research</i> , 2018, 88, 1132-1151.	1.6	43
51	Formation of waterfalls by intermittent burial of active faults. <i>Bulletin of the Geological Society of America</i> , 2018, 130, 522-536.	3.3	11
52	Abrupt drainage basin reorganization following a Pleistocene river capture. <i>Nature Communications</i> , 2018, 9, 3756.	12.8	45
53	Degradation of 100-m Scale Rocky Ejecta Craters at the InSight Landing Site on Mars and Implications for Surface Processes and Erosion Rates in the Hesperian and Amazonian. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2732-2759.	3.6	27
54	The Seismic Signature of Debris Flows: Flow Mechanics and Early Warning at Montecito, California. <i>Geophysical Research Letters</i> , 2018, 45, 5528-5535.	4.0	69

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55	Morphologic Diversity of Martian Ripples: Implications for Large-Ripple Formation. <i>Geophysical Research Letters</i> , 2018, 45, 10,229.	4.0	59
56	Transient Reactivation of a Deep-Seated Landslide by Undrained Loading Captured With Repeat Airborne and Terrestrial Lidar. <i>Geophysical Research Letters</i> , 2018, 45, 4841-4850.	4.0	30
57	Flow resistance, sediment transport, and bedform development in a steep gravel-bedded river flume. <i>Geomorphology</i> , 2018, 320, 111-126.	2.6	15
58	Intense Granular Sheetflow in Steep Streams. <i>Geophysical Research Letters</i> , 2018, 45, 5509-5517.	4.0	9
59	What sets the size of current ripples?. <i>Geology</i> , 2017, 45, 243-246.	4.4	37
60	Hydrodynamics of steep streams with planar coarse-grained beds: Turbulence, flow resistance, and implications for sediment transport. <i>Water Resources Research</i> , 2017, 53, 2240-2263.	4.2	39
61	Experimental evidence that ooid size reflects a dynamic equilibrium between rapid precipitation and abrasion rates. <i>Earth and Planetary Science Letters</i> , 2017, 468, 112-118.	4.4	52
62	Slope, grain size, and roughness controls on dry sediment transport and storage on steep hillslopes. <i>Journal of Geophysical Research F: Earth Surface</i> , 2017, 122, 941-960.	2.8	37
63	A Mechanistic Model of Waterfall Plunge Pool Erosion into Bedrock. <i>Journal of Geophysical Research F: Earth Surface</i> , 2017, 122, 2079-2104.	2.8	68
64	Direct measurements of lift and drag on shallowly submerged cobbles in steep streams: Implications for flow resistance and sediment transport. <i>Water Resources Research</i> , 2017, 53, 7607-7629.	4.2	38
65	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.	3.6	83
66	What controls channel form in steep mountain streams?. <i>Geophysical Research Letters</i> , 2017, 44, 7245-7255.	4.0	27
67	Self-formed waterfall plunge pools in homogeneous rock. <i>Geophysical Research Letters</i> , 2017, 44, 200-208.	4.0	49
68	Model predictions of long-lived storage of organic carbon in river deposits. <i>Earth Surface Dynamics</i> , 2017, 5, 711-730.	2.4	53
69	Canyon formation constraints on the discharge of catastrophic outburst floods of Earth and Mars. <i>Journal of Geophysical Research E: Planets</i> , 2016, 121, 1232-1263.	3.6	34
70	Experimental river delta size set by multiple floods and backwater hydrodynamics. <i>Science Advances</i> , 2016, 2, e1501768.	10.3	72
71	Climate-change versus landslide origin of fill terraces in a rapidly eroding bedrock landscape: San Gabriel River, California. <i>Bulletin of the Geological Society of America</i> , 2016, 128, 1228-1248.	3.3	19
72	Progressive incision of the Channeled Scablands by outburst floods. <i>Nature</i> , 2016, 538, 229-232.	27.8	92

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73	The grain size gap and abrupt gravel-sand transitions in rivers due to suspension fallout. <i>Geophysical Research Letters</i> , 2016, 43, 3777-3785.	4.0	60
74	Avulsion cycles and their stratigraphic signature on an experimental backwater-controlled delta. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 1651-1675.	2.8	56
75	Time scale bias in erosion rates of glaciated landscapes. <i>Science Advances</i> , 2016, 2, e1600204.	10.3	56
76	Large wind ripples on Mars: A record of atmospheric evolution. <i>Science</i> , 2016, 353, 55-58.	12.6	144
77	Sediment transport through self-adjusting, bedrock-walled waterfall plunge pools. <i>Journal of Geophysical Research F: Earth Surface</i> , 2016, 121, 939-963.	2.8	23
78	Hydraulics of floods upstream of horseshoe canyons and waterfalls. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 1227-1250.	2.8	12
79	Unraveling bed slope from relative roughness in initial sediment motion. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 474-489.	2.8	76
80	New insights into the mechanics of fluvial bedrock erosion through flume experiments and theory. <i>Geomorphology</i> , 2015, 244, 33-55.	2.6	104
81	The role of waterfalls and knickzones in controlling the style and pace of landscape adjustment in the western San Gabriel Mountains, California. <i>Bulletin of the Geological Society of America</i> , 2015, 127, 539-559.	3.3	67
82	Stratigraphy of Aeolis Dorsa, Mars: Stratigraphic context of the great river deposits. <i>Icarus</i> , 2015, 253, 223-242.	2.5	38
83	Particle friction angles in steep mountain channels. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 242-259.	2.8	53
84	Deposition, exhumation, and paleoclimate of an ancient lake deposit, Gale crater, Mars. <i>Science</i> , 2015, 350, aac7575.	12.6	471
85	Amphitheater-headed canyons formed by megaflooding at Malad Gorge, Idaho. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 57-62.	7.1	66
86	Force chains as the link between particle and bulk friction angles in granular material. <i>Geophysical Research Letters</i> , 2014, 41, 8862-8869.	4.0	15
87	Knickpoint formation, rapid propagation, and landscape response following coastal cliff retreat at the last interglacial sea-level highstand: Kaua'i, Hawai'i. <i>Bulletin of the Geological Society of America</i> , 2014, 126, 925-942.	3.3	51
88	Incipient sediment motion across the river to debris-flow transition. <i>Geology</i> , 2014, 42, 191-194.	4.4	96
89	Sediment transport and topographic evolution of a coupled river and river plume system: An experimental and numerical study. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 1263-1282.	2.8	50
90	Experimental evidence for fluvial bedrock incision by suspended and bedload sediment. <i>Geology</i> , 2014, 42, 523-526.	4.4	67

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91	O <sub>2</sub> constraints from Paleoproterozoic detrital pyrite and uraninite. <i>Bulletin of the Geological Society of America</i> , 2014, 126, 813-830.	3.3	115
92	Numerical simulations of bedrock valley evolution by meandering rivers with variable bank material. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 927-950.	2.8	44
93	Testing morphodynamic controls on the location and frequency of river avulsions on fans versus deltas: Huanghe (Yellow River), China. <i>Geophysical Research Letters</i> , 2014, 41, 7882-7890.	4.0	103
94	Quantitative bounds on morphodynamics and implications for reading the sedimentary record. <i>Nature Communications</i> , 2014, 5, 3298.	12.8	57
95	Timescales of fluvial activity and intermittency in Milna Crater, Mars. <i>Icarus</i> , 2014, 241, 130-147.	2.5	26
96	A physical model for seismic noise generation by turbulent flow in rivers. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 2209-2238.	2.8	110
97	Deciphering boulder mobility and erosion from cosmogenic nuclide exposure dating. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 184-197.	2.8	11
98	Deltaic deposits at Aeolis Dorsa: Sedimentary evidence for a standing body of water on the northern plains of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2013, 118, 1285-1302.	3.6	139
99	Experimental study on coarse grain saltation dynamics in bedrock channels. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 1161-1176.	2.8	52
100	Fluvial features on Titan: Insights from morphology and modeling. <i>Bulletin of the Geological Society of America</i> , 2013, 125, 299-321.	3.3	93
101	Fault-zone controls on the spatial distribution of slow-moving landslides. <i>Bulletin of the Geological Society of America</i> , 2013, 125, 473-489.	3.3	67
102	A vector-based method for bank-material tracking in coupled models of meandering and landscape evolution. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 2421-2437.	2.8	10
103	Growth and form of the mound in Gale Crater, Mars: Slope wind enhanced erosion and transport. <i>Geology</i> , 2013, 41, 543-546.	4.4	147
104	Landslide velocity, thickness, and rheology from remote sensing: La Clapière landslide, France. <i>Geophysical Research Letters</i> , 2013, 40, 4299-4304.	4.0	60
105	Vegetation and wildfire controls on sediment yield in bedrock landscapes. <i>Geophysical Research Letters</i> , 2013, 40, 1093-1097.	4.0	51
106	Sediment storage by vegetation in steep bedrock landscapes: Theory, experiments, and implications for postfire sediment yield. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 1147-1160.	2.8	36
107	Influence of bed patchiness, slope, grain hiding, and form drag on gravel mobilization in very steep streams. <i>Journal of Geophysical Research F: Earth Surface</i> , 2013, 118, 982-1001.	2.8	48
108	Spatial and temporal trends for water-flow velocity and bed-material sediment transport in the lower Mississippi River. <i>Bulletin of the Geological Society of America</i> , 2012, 124, 400-414.	3.3	167

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109	Origin of giant wave ripples in snowball Earth cap carbonate. <i>Geology</i> , 2012, 40, 827-830.	4.4	35
110	Backwater controls of avulsion location on deltas. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	139
111	A physical model for seismic noise generation from sediment transport in rivers. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	141
112	Backwater and river plume controls on scour upstream of river mouths: Implications for fluvio- $\Delta$ taic morphodynamics. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	146
113	Were Aqueous Ripples on Mars Formed by Flowing Brines?. , 2012, , 139-150.		23
114	A model for fire-induced sediment yield by dry ravel in steep landscapes. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	85
115	Enhanced runout and erosion by overland flow at low pressure and sub-freezing conditions: Experiments and application to Mars. <i>Icarus</i> , 2011, 211, 443-457.	2.5	48
116	Rapid formation of a modern bedrock canyon by a single flood event. <i>Nature Geoscience</i> , 2010, 3, 477-481.	12.9	127
117	Linking river-flood dynamics to hyperpycnal-plume deposits: Experiments, theory, and geological implications. <i>Bulletin of the Geological Society of America</i> , 2010, 122, 1389-1400.	3.3	79
118	Do hyperpycnal-flow deposits record river-flood dynamics?. <i>Geology</i> , 2009, 37, 1067-1070.	4.4	122
119	The persistence of waterfalls in fractured rock. <i>Bulletin of the Geological Society of America</i> , 2009, 121, 1123-1134.	3.3	125
120	Is the critical Shields stress for incipient sediment motion dependent on channel- $\Delta$ bed slope?. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	364
121	A model for fluvial bedrock incision by impacting suspended and bed load sediment. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	186
122	Deposits from Wave-Influenced Turbidity Currents: Pennsylvanian Minturn Formation, Colorado, U.S.A.. <i>Journal of Sedimentary Research</i> , 2008, 78, 480-498.	1.6	93
123	Formation of Box Canyon, Idaho, by Megaflood: Implications for Seepage Erosion on Earth and Mars. <i>Science</i> , 2008, 320, 1067-1070.	12.6	148
124	Formation of amphitheater-headed valleys by waterfall erosion after large-scale slumping on Hawai'i. <i>Bulletin of the Geological Society of America</i> , 2007, 119, 805-822.	3.3	121
125	Valley formation and methane precipitation rates on Titan. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	104
126	Can springs cut canyons into rock?. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	153



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127	High-Density Suspensions Formed Under Waves. <i>Journal of Sedimentary Research</i> , 2005, 75, 386-397.	1.6	40
128	Turbulent structure of high-density suspensions formed under waves. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	27
129	Narrower Paleoœcanyons Downsize Megafloods. <i>Geophysical Research Letters</i> , 0, , .	4.0	2