

Michael P. Lamb

Geological and Planetary Sciences
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Appointments

Professor of Geology, Geological and Planetary Science, California Institute of Technology, 2014 – present.
Geology Option Representative, Geological and Planetary Science, California Institute of Technology, 2014-present.
Assistant Professor, Geological and Planetary Sciences, California Institute of Technology, 2009 – 2014.
Postdoctoral Fellow, Geological Sciences, University of Texas, Austin, Advisor: David Mohrig, 2008 – 2009.
Scientist, St. Anthony Falls Laboratory, Minneapolis, Minnesota, Advisors: Gary Parker & Chris Paola, 2000 – 2001.

Education

Ph.D. Earth and Planetary Science, University of California, Berkeley, Advisor: William Dietrich, 2008. Dissertation: *Formation of Amphitheater-headed Canyons*.
M.S. Oceanography, University of Washington, Seattle, Advisor: Jeffrey Parsons, 2003. Thesis: *High-density suspensions formed under waves*.
B.S. Geophysics *high distinction* & B.S. Geology *magna cum laude*, University of Minnesota, Minneapolis, 2001.

Major Research Interests

Geomorphology; sedimentology; sediment transport; modern and ancient surface processes on Earth, Mars and Titan. Recent work includes field observations, physical modeling and theory on sediment transport mechanics in mountain rivers, wildfire and debris flows, fluvial and waterfall bedrock erosion mechanics, canyon formation by megafloods on Earth and Mars, fluvial processes and sedimentology on Mars, coastal river and delta morphodynamics, autogenic stratigraphy, and early Earth environments.

Honors and Awards

NASA Group Achievement Award, MSL Curiosity Mission Science, 2017
James B. Macelwane Medal, American Geophysical Union, 2017
Fellow, American Geophysical Union, 2017
Keynote Lecturer, Steepest Descent Meeting, Vienna, 2017
Royal Academy of Engineering Distinguished Visitor, Imperial College - London, 2015
NASA Group Achievement Award, MSL Curiosity Mission Science, 2015
Editor's Citation for Refereeing for *Reviews of Geophysics*, 2014
Editor's Citation for Refereeing for *Geophysical Research Letters*, 2013
Luna B. Leopold Young Scientist Award, American Geophysical Union, 2012
Robert P. Sharp Capstone Lecture, American Geophysical Union, 2012
Editor's Citation for Excellence in Refereeing for *JGR-Earth Surface*, 2009
Louderback Award for Outstanding Scholarship, University of California, 2007
National Defense Science and Engineering Graduate Fellowship, 2001-2004
Academic Rewards for College Scientists (ARCS) National Scholarship, 2001-2004
Aldrich Award for Academic Excellence, University of Minnesota, 2001
Field Mentor Grant, Association of American State Geologists, 2000

Dennis Scholarship for Academic Excellence, University of Minnesota, 2000
W.A. Hoyer National Scholarship, Society of Professional Well Log Analysts, 2000

Selected Professional Service and Experience

Team Member, Mars Exploration Rover *Opportunity*, 2016 – present.
Team Member, Mars Science Laboratory rover *Curiosity*, 2014 – present.
Designed infographic on fires and debris flows, LA Times (front page), 2014, 2015.
Outreach with Pasadena Unified School District including laboratory demonstrations and tours, 2009 - present.
Interviewee for local and national news on natural hazards and related public concerns (16 events, 2009-2015).
Caltech's Watson public lecture: "When Rocks Roll: How Sediment Transport Shapes Planetary Surfaces," March, 2014.
Developed and led workshop on sediment transport in steep rivers for the annual meeting of the National Association of Geoscience Teachers, 2011.
Designed an informational geologic sign at Box Canyon State Park, Idaho, 2010.
Founder and moderator of "GeomorphLectures" Wiki that facilitates transfer of educational materials in geomorphology, 2010 – present.
Co-convenor: *Earth and Planetary Surfaces General Poster Session*, AGU 2009 – present.
Caltech Geology Option Representative (2014-present), Member of the Caltech Undergraduate Transfer Admissions Committee (2013-present) and eight other committees in GPS (2010-present).
Reviewer for more than forty international scholarly journal and funding agencies.
Member: American Geophysical Union, European Geophysical Union, Geological Society of America, Society for Sedimentary Geology (SEPM).

Courses Taught

Ge13: Mentor for *Scientific Writing Tutorial*, Spring 2010, Spring 2011, Winter 2016.
Ge40: *Special Problems for Undergraduates*, Spring 2010, Fall 2010, Spring 2011, Winter 2014, Spring 2014.
Ge125: *Geomorphology*, Fall 2010, Fall 2012, Fall 2014, Fall 2016.
Ge126: *Topics in Geomorphology*:
 Winter 2010: *Geomorphology and Wildfire*
 Winter 2011: *Sediment Transport Physics*
 Winter 2012: *Alluvial Fans and Pediments*
 Winter 2014: *Organic Carbon and Landscapes* (with J. West and W. Fischer)
 Winter 2015: *Erosion of Rock by Wind*
 Winter 2016: *Soil Production in Steep Landscapes*
 Winter 2017: *Morphodynamics with Gary Parker*
 Winter 2018: *Rivers in Permafrost*
Ce/Ge/Ge222 (also Ge192): *Earthquake Source Processes, Debris Flows, and Soil Liquefaction* (with Ampuero, Andrade and Lapusta), Spring 2012, Spring 2013.
Ge193: *Subglacial hydrology and erosion* (with V. Tsai), Winter 2013
Ge121: *Advanced Field Mapping*:
 Spring 2012: *Death Valley and Carrizo Plain*
 Fall 2013: *The Channeled Scablands of eastern Washington*
 Fall 2015: *Inverted Channels of Southern Utah*
 Fall 2017: *Rivers without vegetation in Death Valley*

Student and Postdoctoral Research Advised

High school students: Conor O'Toole (2010), Khadijah Omerdin (2012-2013), Gheorghe Schreiber (2013), Jay Yalamanchili (2015).

Undergraduate and visiting Masters students: Peter Buhler (2009 - 2010), Eric Kleinsasser (2010), Mariya Levina (2010), Cindy Tran (2010 –2011), Will Steinhardt (2011), Odin Marc (2010 - 2011), Mathieu Lapôtre (2010-2011), Connor O’Toole (2011), Cailan Halliday (2011), Aaron Tran (2012), Daniel Lo (2012), Fanny Brun (2013), Michael Jensen (2013), Hima Hassenruck-Gudipati (2013-2014), Julianne Preimesberger (2014), Elliot Simon (2014), Sam Holo (2015), Kirby Sikes (2015-2016), Brian Zdeb (2016), Jose Silvestre (2017), Sarah Steele (2017-2018), Lydia Kivrak (2017), Erich Herzig (2016-2018), Omar Wani (2018), Zewei Ma (2018).

PhD students as secondary advisor: Brent Minchew (2011), Luca Malatesta (2011-2016), Kirsten Siebach (2011-2012), Robert Wills (2013 – 2016), Abbey Nastan (2013-2014), Yanzhe Zhu (2016-present).

PhD students as primary advisor:

Ajay Limaye (2009- 2014; now postdoctoral scholar Arizona State)

Joel Scheingross (2009- 2015; now Assistant Professor U. Nevada-Reno)

Jeff Prancevic (2010 – 2016; now postdoctoral scholar U. California –Santa Barbara)

Mathieu Lapôtre (2012 – 2017; Ehlmann co-advised; now postdoctoral scholar Harvard)

Austin Chadwick (2014 – present)

Alistair Hayden (2014 – present)

Madison Douglas (2017 – present)

Postdoctoral scholars:

Ryan Ewing (2010 – 2011; now Assistant Professor, Texas AM)

Ben Mackey (2010 – 2011; now Natural Hazards Analyst, Otago Regional Council, NZ)

Phairot Chatanantavet (2010 – 2013; now Engineering Consulatan, Thailand)

Adam Booth (2012-2013; now Assistant Professor, Portland State)

Roman DiBiase (2011–2014; now Assistant Professor Penn State)

Dirk Scherler (2013-2014; J.-P. Avouac main advisor; now Assistant Prof. at GFZ-Potsdam)

Vamsi Ganti (2012-2014; now Assistant Professor U.C. Santa Barbara)

Isaac Larsen (2013-2015; now Assistant Professor, U. Massachusetts-Amherst)

Florent Gimbert (2013-2015; V. Tsai main advisor; now Scientist, CNRS, France)

Marisa Palucis (2014-2017; now Assistant Professor, Dartmouth)

Mark Torres (2015-2017; W. Fischer co-advisor; now Assistant Professor, Rice U.)

Lizzy Trower (2015-2017; W. Fischer co-advisor; now Assistant Professor, U.C. Boulder)

Ke Liu (2017-2018; Marc Simard (JPL) main advisor; now on Wall Street)

Tien Hao (2017 – present; Marc Simard (JPL) main advisor)

Alex Beer (2017 – present)

Flavien Beaud (2017 – present)

Jan de Leeuw (2017 – present)

Invited Seminars

2018: Universidad Complutense, Madrid, Spain; GeoMod Conference, Barcelona, Spain; UNED Madrid, Spain; GeoForschungsZentrum (GFZ), Potsdam, Germany.

2017: American Geophysical Union Fall Meeting, New Generation of Scientists session; European Geophysical Union, Planetary Geomorphology; Keynote Lecturer Steepest Descent Symposium, Vienna, Austria; University of Basel, Switzerland.

2016: University of California - Santa Barbara; University of Oregon; Jet Propulsion Laboratory, Director’s conference; University of California – Santa Cruz.

2015: Brown University; Binghamton Symposium on experimental geomorphology; Imperial College, London.

2014: Rice University, University of California-Los Angeles, Caltech-GPS Division Seminar, Brown University, Earnest C. Watson public lecture at Caltech, Texas A&M; Stanford University.

2013: University of British Columbia, Geography; Simon Fraser University, Geography; Harvard University, EPS; Caltech, Board of Trustees; University of California – Los

- Angeles; ETH, Zurich, Switzerland; WSL, Zurich, Switzerland; IRSTEA, Grenoble, France; NASA Jet Propulsion Laboratory; Geological Society of America Annual Meeting; American Geophysical Union Annual Meeting; Stratodynamics Workshop, Nagasaki, Japan.
- 2012: Caltech, The Associates; University of Colorado, Boulder; University of Southern California, Earth Science; University of California, Santa Cruz, Earth Science; American Geophysical Union; Robert P. Sharp Capstone Lecture, AGU.
- 2011: University of California, Riverside, Earth Sciences; University of Illinois, Champaign, Geology; University of Wyoming, Geology and Geophysics; Titan Surface Processes Workshop, Pasadena.
- 2010: American Geophysical Union; California Institute of Technology, Board of Trustees, Keck Institute for Space Sciences & GPS Geoclub seminar; University of Washington, Seattle, School of Oceanography; Chevron Corporation; University of Pittsburg, Civil and Environmental Engineering.
- 2009: University of California, Santa Barbara, Earth Science; California Institute of Technology, Environmental Science and Engineering & GPS Division seminar; University of Arizona, Tucson, Geosciences; University of California, Berkeley, Civil and Environmental Engineering; University of Texas, Austin, School of Geosciences.
- 2008: University of Texas, Austin, RioMar Workshop & School of Geosciences; U.S. Geological Survey, Menlo Park; University of California, Berkeley, Earth and Planetary Science.
- 2007: Rice University, Earth Science; California Institute of Technology, Geological and Planetary Sciences; Massachusetts Institute of Technology, Earth and Planetary Sciences; University of Wisconsin, Madison, Geology and Geophysics.

Refereed Publications

Please see <http://geomorph.caltech.edu/publications> for an up-to-date publication list and PDF downloads for in-review and published articles.

Google Scholar citation h-index = 36; i10-index = 70; Citations = 3592.

* denotes a graduate student, post-doctoral scholar or Lamb group staff author

**denotes a Caltech undergraduate student or high school student intern author

106. Stack, K.M., Grotzinger, J.P., Lamb, M.P., Gupta, S., Rubin, D.M., Kah, L.C., Edgar, L.A., Fey, D.M., Hurowitz, J.A., McBride, M., Rivera-Hernández, F, Sumner, D.Y., Van Beek, J.K., Williams, R.M.R., Yingst, R.A. 2018, Evidence for plunging river plume deposits in the Pahrump Hills member of the Murray formation, Gale crater, Mars, *Sedimentology*.
105. Sweeney, J., N. H. Warner, V. Ganti, M. P. Golombek, M. P. Lamb, R. Fergason, and R. Kirk, 2018, Degradation of One-Hundred-Meter-Scale Impact Craters on Mars and Implications for Surface Process Rates in the Hesperian and Amazonian, *Journal of Geophysical Research – Planets*.
104. Fan, N., Chu, Z., Jiang, L., Hassan, M., Lamb, M.P., Liu, X., 2018, Abrupt drainage basin reorganization following a Pleistocene river capture, *Nature Communications*.
103. *Gimbert, *Fuller, Lamb, Tsai, Johnson, 2018, Investigating river sediment transport mechanics and its control on induced seismic noise using flume experiments and accelerometer-embedded tracers, *Earth Surface Process and Landforms*.
102. *Palucis, M., *Ulizio, T., *Fuller, B., Lamb, M.P., 2018, Flow resistance, sediment transport, and bedform development in a steep gravel-bedded river flume, *Geomorphology*.
101. Lapotre, M. G. A., R. C. Ewing, C. M. Weitz, K. W. Lewis, M. P. Lamb, B. L. Ehlmann, and D. M. Rubin, 2018, Morphologic Diversity of Martian Ripples: Implications for Large-Ripple Formation, *Geophysical Research Letters*.

100. *Trower, E.J., O'Reilly, S.S., Gomes, M., Cantine, M., Stein, N., Grotzinger, H., Strauss, J.V., Lamb, M.P., Grotzinger, J.P., Knoll, A.H., Fischer, W.W., in press, Active ooid growth driven by sediment transport in a high energy shoal, Little Ambergris Cay, Turks and Caicos, British Overseas Territories. *J. Sedimentary Research*.
99. *Trower, E.J., *Ganti, V., Fischer, W.W., Lamb, M.P., 2018, Erosional surfaces in the Upper Cretaceous Castlegate Sandstone (Utah, USA): Sequence boundaries or autogenic scour from backwater hydrodynamics?, *Geology*, doi: 10.1130/G40273.1.
98. *Lai, V.H., Tsai, V.C., Lamb, M.P., *Ulizio, T.P., *Beer, A.R., 2018, The Seismic Signature of Debris Flows: Flow Mechanics and Early Warning at Montecito, California, *Geophysical Research Letters*.
97. *Palucis, M., *Ulizio, T., *Fuller, B., Lamb, M.P., 2018, Intense granular sheelflow in steep streams, *Geophysical Research Letters*.
96. Booth, A.M., McCarley, J., Hinkle, J., Shaw, S., Ampuero, J-P, Lamb, M.P., 2018, Transient reactivation of a deep-seated landslide complex by undrained loading captured with repeat airborne and terrestrial lidar, *Geophysical Research Letters*.
95. *Ayoub, F., Jones, C.E., Lamb, M.P., Holt, B., Shaw, J.B., Mohrig, D., Wagner, W., 2018, Inferring surface currents within submerged, vegetated deltaic islands and wetlands from multi-pass airborne SAR. *Remote Sensing of Environment*.
94. Myrow, P.M., Lamb, M.P., Ewing, R.C., 2018, Rapid sea level rise in the aftermath of a Neoproterozoic snowball Earth, *Science*, doi.10.1126/science.aap8612.
93. *Lapotre, M.G.A., Lamb, M.P., 2018, Substrate controls on valley formation by groundwater on Earth and Mars, *Geology*, doi.org/10.1130/G40007.1.
92. Allen, G.H, Pavelsky, T.M., Barefoot, E.A., Lamb, M.P., Butman, D, Tashie, A., Gleason, C.J., 2018, Similarity of stream width distributions across headwater systems, *Nature Communications*, 610, doi:10.1038/s41467-018-02991-w.
91. *Prancevic, J.P., Lamb, M.P., *Palucis, M., Venditti, J., 2018, The role of three-dimensional boundary stresses in limiting the occurrence and size of experimental landslides, *J. Geophysical Research-Earth Surface*.
90. *Scheingross, J.S. and Lamb, M.P., 2017, A mechanistic model of waterfall plunge-pool erosion into bedrock, *J. Geophysical Research-Earth Surface*.
89. *Torres, M. A., Limaye, A. B., Ganti, V., Lamb, M. P., West, A. J., and Fischer, W. W., 2017, Model predictions of long-lived storage of organic carbon in river deposits, *Earth Surface Dynamics*, doi:10.5194/esurf-2017-29.
88. Lamb, M.P., **Brun, F., *Fuller, B.M., 2017, Direct measurements of lift and drag on shallowly submerged cobbles in steep streams: Implications for flow resistance and sediment transport. *Water Resources Research*.
87. *Malatesta, L.C. and Lamb, M.P., 2017, Formation of waterfalls by intermittent burial of active faults, *Geological Society of America Bulletin*.
86. *Palucis, M.C. and Lamb, M.P., 2017, What controls channel form in steep mountain streams? *Geophysical Research Letters*, 44, doi:10.1002/2017GL074198.
85. Ewing, R.C., *Lapotre, M.G.A., Lewis, K.W., Day, M., Stein, N., Rubin, D.M, Sullivan, R., Banham, S., Lamb, M.P., Bridges, N.T., Gupta, S., Fischer, W.W., 2017, Sedimentary processes of the Bagnold Dunes: Implications for the eolian rock record of Mars, *J. Geophysical Research – Planets*, 122, doi:10.1002/2017JE005324..
84. *Trower, E., Lamb, M.P., Fischer, W.W., 2017, Experimental evidence that ooid size reflects a dynamic equilibrium between rapid precipitation and abrasion rates, *Earth and Planetary Science Letters*.
83. *DiBiase, R.A., Lamb, M.P., *Ganti, V. and *Booth, A.M., 2017, Slope, grain size and roughness controls on hillslope sediment transport in steep landscapes, *J. Geophysical Research - Earth Surface*.
82. Lamb, M.P., **Brun, F., *Fuller, B.M., 2017, Hydrodynamics of steep streams with planar coarse-grained beds: Turbulence, flow resistance, and implications for sediment transport, *Water Resources Research*, v. 53, doi:10.1002/ 2016WR019579.

81. *Lapotre, M.G.A., Lamb, M.P. and B.J. McElroy, 2017, What sets the size of current ripples?, *Geology*, doi:10.1130/G38598.1.
80. *Scheingross, J.S., **Lo, D.Y., and Lamb, M.P., 2016, Self-formed waterfall plunge pools in homogeneous rock. *Geophysical Research Letters*, 43, doi:10.1002/2016GL071730.
79. *Larsen, I.J. and M.P. Lamb, 2016, Progressive incision of the Channeled Scablands by outburst floods, *Nature*, doi:10.1038/nature19817.
78. *Ganti, V., *von Hagke, C., *Scherler, D., Lamb, M.P., Avouac, J.P., Fischer, W.W., 2016, Time scale bias in erosion rates of glaciated landscapes, *Science Advances*, 2, e1600204, doi:10.1126/sciadv.1600204.
77. *Ganti, V., *Chadwick, A., *Hassenruck-Gudipati, H., Lamb, M.P., 2016, Avulsion cycles and their stratigraphic signature on an experimental backwater-controlled delta, *Journal of Geophysical Research - Earth Surface*, 121, doi:10.1002/2016JF003915.
76. *Lapotre, M. G. A., R. C. Ewing, M. P. Lamb, W. W. Fischer, J. P. Grotzinger, D. M. Rubin, K. W. Lewis, M. J. Ballard, M. Day, S. Gupta, S. G. Banham, N. T. Bridges, D. J. Des Marais, A. A. Fraeman, J. A. Grant, K. E. Herkenhoff, D. W. Ming, M. A. Mischna, M. S. Rice, D. A. Sumner, A. R. Vasavada, R. A. Yingst, 2016, Large wind ripples on Mars: A record of atmospheric evolution, *Science*, v. 353 (6294), p. 55-58, doi: 10.1126/science.aaf3206.
75. *Lapotre, M.G.A., Lamb M.P. and R.M.E. Williams, 2016, Canyon formation constraints on the discharge of catastrophic outburst floods of Earth and Mars, *Journal of Geophysical Research - Planets*, 121, p. 1-32, doi: 10.1002/2016JE005061.
74. *Ganti, V., *Chadwick, A.J., *Hassenruck-Gudipati, H.J., *Fuller, B.M., Lamb, M.P., 2016, Experimental river delta size set by multiple floods and backwater hydrodynamics, *Science Advances*, 2, no. 5, e1501768, doi:10.1126/sciadv.1501768.
73. Shaw, J.B., *Ayoub, F., Jones, C.E., Lamb, M.P., Holt, B., Wagner, W., Coffey, T., Chadwick, J.A. and Mohrig, D., 2016, Airborne radar imaging of subaqueous channel evolution in Wax Lake Delta, Louisiana, USA., *Geophysical Research Letters*, doi: 10.1002/2016GL068770.
72. Lamb, M.P. and Venditti, J.V., 2016, The grain size gap and abrupt gravel-sand transitions in rivers due to suspension fallout. *Geophysical Research Letters*, 43, doi:10.1002/2016GL068713.
71. *Scheingross, J.S. and Lamb, M.P., 2016, Sediment transport through self-adjusting, bedrock-walled waterfall plunge pools. *Journal of Geophysical Research - Earth Surface, J. Geophys. Res. Earth Surf.*, 121, doi:10.1002/2015JF003620
70. *Limaye, ABS and Lamb, MP, 2016, Numerical model predictions of autogenic fluvial terraces and comparison to climate change expectations. *Journal of Geophysical Research - Earth Surface*, 121, doi:10.1002/2014JF003392.
69. *Scherler, D., Lamb, M.P., Rhodes, E.J., Avouac, J.P., 2016, Climate change versus landslide origin of fill terraces in an arid bedrock landscape: San Gabriel River, CA, *Geological Society of America Bulletin*, doi: doi:10.1130/B31356.1.
68. Grotzinger, J.P., S. Gupta, M. C. Malin, D. M. Rubin, J. Schieber, K. Siebach, D. Y. Sumner, K. M. Stack, A. R. Vasavada, R. E. Arvidson, F. Calef III, L. Edgar, W. F. Fischer, J. A. Grant, J. Griffes, L. C. Kah, M. P. Lamb, K. W. Lewis, N. Mangold, M. E. Minitti, M. Palucis, M. Rice, R. M. E. Williams, R. A. Yingst, D. Blake, D. Blaney, P. Conrad, J. Crisp, W. E. Dietrich, G. Dromart, K. S. Edgett, R. C. Ewing, R. Gellert, J. A. Hurowitz, G. Kocurek, P. Mahaffy, M. J. McBride, S. M. McLennan, M. Mischna, D. Ming, R. Milliken, H. Newsom, D. Oehler, T. J. Parker, D. Vaniman, R. C. Wiens, and S. A. Wilson, 2015, Deposition, exhumation and paleoclimate of an ancient lake deposit, Mars, *Science*, 350 (6257), doi: 10.1126/science.aac7575.
67. *Lapotre, MGA and Lamb, MP, 2015, Hydraulics of floods upstream of horseshoe canyons and waterfalls. *Journal of Geophysical Research - Earth Surface*. doi: 10.1002/2014JF003412.

66. Kite, E.S., Howard, A.D., Lucas, A.S., Armstrong, J.C., Aharonson, O., and Lamb, M.P., 2015, Stratigraphy of Aeolis Dorsa, Mars: Stratigraphic context of the great river deposits, *Icarus*, doi: 10.1016/j.icarus.2015.03.007.
65. Hooshmand, A., Horner-Devine, A.R., Lamb, M.P., 2015, Structure of turbulence and sediment stratification in wave-supported mud layers, *Journal of Geophysical Research-Oceans*, doi: 10.1002/2014JC010231.
64. Lamb, M.P., Finnegan, N.J., *Scheingross, J.S., Sklar, L.S., 2015, New insight into the mechanics of fluvial bedrock erosion through flume experiments and theory, *Geomorphology*, Special issue 46th Annual Binghamton Geomorphology Symposium: Laboratory Experiments in Geomorphology, doi: 10.1016/j.geomorph.2015.03.003.
63. *Prancevic, J.P. and Lamb, M.P., 2015, Unraveling bed slope from relative roughness in initial sediment motion. *Journal of Geophysical Research - Earth Surface*. doi: 10.1002/2014JF003323.
62. *Prancevic, J.P. and Lamb, M.P., 2015, Particle friction angles in steep mountain channels, *Journal of Geophysical Research - Earth Surface*. doi:10.1002/2014JF003286.
61. *Booth, AM, *Hurley, R, Lamb, MP, Andrade, J, 2014, Force chains as the link between particle and bulk friction angles in granular material, *Geophysical Research Letters*, doi: 10.1002/2014GL061981.
60. Golombek, M.P., Warner, N.H., *Ganti, V., Lamb, M.P., Parker, T.J., Ferguson, R.L., Sullivan, R., 2014, Small Crater Modification on Meridiani Planum and Implications for Erosion Rates and Climate Change on Mars. *JGR-Planets*, doi: 10.1002/2014JE004658.
59. *Ganti, V., Chu, Z., Lamb, M.P., Nittrouer, J.A., Parker, G., 2014, Testing morphodynamic controls on the location and frequency of river avulsions on fans versus deltas: Huanghe (Yellow River), China, *Geophysical Research Letters*, doi: 10.1002/2014GL061918.
58. *Gimbert, F., Tsai, V.C., Lamb, M.P., 2014, A physical model for seismic noise generation by turbulent flow in rivers, *JGR-Earth Surface*, doi: 10.1002/2014JF003201.
57. *Ewing, R.C., *Eisenman, I., Lamb, M.P., Poppick, L., Maloof, A.C., Fischer, W.W., 2014, New constraints on equatorial temperatures during a Late Neoproterozoic snowball Earth glaciation. *Earth and Planetary Science Letters*.
56. *DiBiase, R.A., Whipple, K.X., Lamb, M.P., Heimsath, A.M., 2014, The role of waterfalls and knickzones in controlling the style and pace of landscape adjustment in the western San Gabriel Mountains, CA. *GSA Bulletin*.
55. **Buhler, P.B., Fassett, C., Head, J.W., Lamb, M.P., 2014, Timescales of fluvial activity and intermittency in Milna Crater, Mars, *Icarus*, doi:10.1016/j.icarus.2014.06.028.
54. *Chatanantavet, P. and Lamb, M.P., 2014, Sediment transport and topographic evolution of a coupled river and river-plume system: An experimental and numerical study, *Journal of Geophysical Research - Earth Surface*, 119, doi:10.1002/2013JF002810.
53. *Scheingross, J.S., **Brun, F., **Lo, D.Y., **Omerdin, K., and Lamb, M.P., 2014, Experimental evidence for bedrock erosion by suspended sediment. *Geology*, doi:10.1130/G35432.1.
52. *Limaye, A.B.S. and Lamb, M.P., 2014, Numerical simulations of bedrock valley evolution by meandering rivers with variable bank material, *Journal of Geophysical Research – Earth Surface*, v. 119, doi:10.1002/2013JF002997.
51. *Ganti, V., Lamb, M.P., McElroy, B.A., 2014, Quantitative Bounds on Environmental Signal Preservation in the Sedimentary Record. *Nature Communications*, doi:10.1038/ncomms4298.
50. *Johnson, J.E., **Gerpheide, A., Lamb, M.P., Fischer, W.W., 2014, O₂ constraints from Paleoproterozoic detrital pyrite and uraninite, *Geological Society of America Bulletin*, doi:10.1130/B30949.1.
49. *Mackey, B.H., *Scheingross, J.S., Lamb, M.P., Farley, K.A., 2014, Knickpoint formation, rapid propagation and landscape response following coastal cliff retreat at last-interglacial sea-level highstand: Kauai, Hawaii, *GSA Bulletin*, doi: 10.1130/B30930.1.

48. *Prancevic, J., Lamb, M.P., and *Fuller, B., 2014, Initial sediment transport across the river-debris flow transition. *Geology*. doi: 10.1130/G34927.1
47. Lamb, M.P., *Mackey, B.H., Farley, K.A., 2014, Amphitheater-headed canyons formed by megaflooding at Malad Gorge, Idaho. *Proceedings of the National Academy of Science*, doi/10.1073/pnas.1312251111.
46. *Limaye, A.B.S. and Lamb, M.P., 2014, A vector-based method for bank material tracking in coupled models of meandering and landscape evolution, *Journal of Geophysical Research – Earth Surface*, VOL. 118, 1–17, doi:10.1002/2013JF002854.
45. *Booth, A.M., Lamb, M.P., Avouac, J.-P., Delacourt, C., 2013, Landslide velocity, thickness and rheology from remote sensing: La Clapiere landslide, France, *Geophysical Research Letters*, v. 40, p. 1-6, doi:10.1002/grl.50828.
44. *DiBiase, R.A., *Limaye, A.B., *Scheingross, J.S., Fischer, W.W. and Lamb, M.P., 2013, Deltaic deposits at Aeolis Dorsa: Sedimentary evidence for a large body of water in the northern plains of Mars, *Journal of Geophysical Research - Planets*, v. 118, p. 1-18, doi: 10.1002/jgre.20100.
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