MATHIEU G. A. LAPÔTRE
Address: Department of Geological Sciences, Stanford University,
450 Jane Stanford Way, Bldg. 320, Rm. 206-207, Stanford, CA 94305, USA.
Email: mlapotre@stanford.edu

APPOINTMENTS

Assistant Professor of Geological Sciences, Stanford University, 2019–present
John Harvard Distinguished Science Fellow, Harvard University, 2017–2019

EDUCATION

Ph.D., Geology, California Institute of Technology, 2017
M.S., Planetary Science, California Institute of Technology, 2014
M.S., Environmental Science & Engineering, Excellence Track, Université de Strasbourg, France, 2011
M.S., Geophysical Engineering, Ecole et Observatoire des Sciences de la Terre (EOST), France, 2011
B.S., Geophysics with minor in Astrophysics, Université de Strasbourg, France, 2009

AWARDS & HONORS

- Kavli Fellow, U.S. National Academy of Sciences, 2020
- John Harvard Distinguished Science Fellowship, Harvard University, 2017-2019
- John C. Crowell Best Ph.D. Dissertation Award, 2nd place, SEPM Soc. Sedimentary Geology Pacific Section, 2017
- NASA Group Achievement Award, MSL Extended Mission-1 Science and Operations Team, 2017
- NASA-NIA RASC-AL Space Design Contest – Best overall, best in theme, PEACH Award, 2016
- Dwornik Award, Honorable Mention – Graduate Oral Presentation, LPSC, 2016
- SETI and NASA Astrobiology Institutes Travel Award, 2016
- NASA Earth and Space Science Fellowship, 2012-2015
- NASA Group Achievement Award, MSL Prime Mission Science and Operations Team, 2015
- AGU Outstanding Student Paper Award, 2014
- National Center for Airborne Laser Mapping (NCALM) Seed Grant, 2013
- Robert P. Sharp Graduate Student Fellowship, Caltech, 2012-2013

PROFESSIONAL SERVICES

- Peer reviewer for: *Nature, Geology, Earth & Planetary Science Letters, Geophysical Research Letters, Journal of Geophysical Research–Planets, Astrobiology, Icarus, Water Resources Research, Planetary & Space Science, Aeolian Research.*
- Panel reviewer for: *NASA Mars Data Analysis Program, NASA Earth and Space Science Fellowship (NESSF) Program.*
- External reviewer for: *NSF Geomorphology & Land-Use Dynamics Program, NASA Mars Data Analysis Program, U.S. Department of Energy (Office of Science), NSERC Discovery Grant Program.*
- Science Organizing Committee member for: *The Ninth International Conference on Mars* (2019), *Bay Area Planetary Science meeting* (2019).
- Session convener/chair at: *GSA* 2016, *AGU* 2018–2019, *LPSC* 2019.
- Student Advisor for the *Planetary Geology Division* of the *Geological Society of America*, 2015–2017.
- Student Representative for the Board of Directors, Ecole et Observatoire des Sciences de la Terre, 2008–2011.
- Internal Affairs Representative of the Strasbourg University Geophysical Society, 2008–2009.

UNIVERSITY SERVICES

- Graduate curriculum committee, Geological Sciences, Stanford (2019–2020)
- Graduate admissions committee, Geological Sciences, Stanford (2020)

MENTORSHIP

- *UNDERGRADUATE STUDENTS:* Jade Fischer (MIT, 2018), Phoebe Murray (Vassar College, 2019), Veronica Pratt (Stanford, 2019–2020).
- *PHD COMMITTEE:* Robert Sare (Stanford, 2019–present), Aaron Steelquist (Stanford, 2019–present), Matthew Reinhold (Stanford, 2019–present).

TEACHING

- GEOLSCI 224 Rivers: The arteries of Earth's continents, Stanford (graduate level)), Spring 2020.
- GEOLSCI 192 Undergraduate Research in Geological Sciences, Stanford, Winter 2019.
- Guest Lecturer for EPS120–Introduction to Planetary Science, Harvard (graduate and undergraduate levels, Prof. Roger Fu), 2018.
- Teaching Assistant for Ge125–Geomorphology, Caltech (graduate and undergraduate levels, Prof. Michael Lamb), 2016.
- Teaching Assistant and Guest Lecturer for Ge151–Planetary Surfaces (graduate and undergraduate levels, Prof. Bethany Ehlmann), 2014–2015.
- Teaching Assistant for Ge101–Introduction to Geology and Geochemistry, Caltech (graduate level, Prof. Brian Wernicke), 2013.

VISITING POSITIONS & PROFESSIONAL EXPERIENCE

- NASA Mars Science Laboratory (MSL) Special Expert Consultant (2017–2018)
- NASA Mars Science Laboratory (MSL) Science and Operations Team Collaborator (2013–2017)
- Graduate Student Researcher and Teaching Assistant, Caltech (2012–2017)
- Graduate Researcher, University of Cambridge, UK (Jun–Dec 2011; advisor: Prof. A. Woods)
- Undergraduate Researcher, Caltech (Jan–Jun 2011; advisor: Prof. M. Lamb)
- Undergraduate Research Scholar, MIT (Jun–Aug 2010; advisor: Prof. Taylor Perron)
- Erasmus Student, Oslo University, Norway (2009–2010; advisors: Drs. O. Galland & M. Dabrowski)
- Researcher and Developer in Seismic Modeling, NORSAR, Kjeller, Norway (2009–2010)
- Undergraduate Visiting Scholar, UC Berkeley (Jun–Aug 2009; advisor: Prof. M. Manga)

EXTENDED TALKS, SEMINARS, & LECTURES

- 2020: University of Michigan.
- 2019: Institut de Physique du Globe de Strasbourg (IPGS), UN Reno.
- 2018: Institut de Physique du Globe de Paris (IPGP), Stanford University, MIT, Harvard University, Dartmouth College, Rice University.
- 2017: MSL Team Meetings (Pasadena, Montreal), Harvard University, UT Austin, CRISM Team Meeting (Houston), NASA Jet Propulsion Laboratory, Brown University.
- 2016: NASA Jet Propulsion Laboratory, MSL Team Meeting (Pasadena), UCLA, Cal State LA.
- 2015: Tokyo Tech, MSL Team Meeting (Paris), CRISM Team Meeting (Baltimore).
- 2013: GFZ Potsdam.

PUBLICATIONS

- *PUBLISHED, IN PRESS, OR ACCEPTED*

28. **Lapôtre, M.G.A.**, & A. Ielpi (in press). The pace of fluvial meanders on Mars and implications for the western delta deposits of Jezero crater, Mars. *AGU Advances.*
27. **Lapôtre, M.G.A.**, J. G. O'Rourke, L. K. Schaefer, K. L. Siebach, C. Spalding, S. Tikoo, & R. D. Wordsworth (2020). Probing space to understand Earth. *Nature Rev. Earth & Env.*, in press, https://doi.org/10.1038/s43017-020-0029-y
26. Ielpi, A. M., **M.G.A. Lapôtre**, A. Finotello, M. Ghinassi, & A. D'Alpaos (2020). Channel mobility drives a diverse stratigraphic architecture in the dryland Mojave River (California, USA). *Earth Surf. Proc. Land.*, in press, https://doi.org/10.1002/ep.4841
25. Ielpi, A. & **M.G.A. Lapôtre** (2020). A ten-fold slowdown in river meander migration driven by plant life. *Nature Geosci*., 13, 82-86, https://doi.org/10.1038/s41561-019-0491-7
24. **Lapôtre, M.G.A.**, A. Ielpi, M.P. Lamb, R.M.E. Williams, & A.H. Knoll (2019). Model for the formation of single-thread rivers in barren landscapes and implications for pre-Silurian and martian fluvial deposits. *J. Geoph. Res. Earth Surf.*, 124(12), 2757–2777, https://doi.org/10.1029/2019JF005156
23. Ielpi. A., & **M.G.A. Lapôtre** (2019). Barren meandering streams in the modern Toiyabe Basin of Nevada, and their relevance to the study of the pre-vegetation rock record. *J. Sed. Res*., 89(5), 399-415, https://doi.org/10.2110/jsr.2019.25
22. Ielpi, A., & **M.G.A. Lapôtre** (2019). Biotic forcing militates against river meandering in the modern Bonneville Basin of Utah. *Sedimentology*, 66(5), 1896–1929, https://doi.org/10.1111/sed.12562
21. Rampe, E.B., **M.G.A. Lapôtre**, & 27 coauthors (2018). Sand mineralogy within the Bagnold Dunes, Gale crater, as observed in situ and from orbit. *Geoph. Res. Letters*, 45(18), 9488-9497, https://doi.org/10.1029/2018GL079073
20. Baker, M., **M.G.A. Lapôtre**, M. Minitti, C. Newman, R. Sullivan, C.M. Weitz, B.L. Ehlmann, A. Vasavada, K. Edgett, N.T. Bridges, & K. Lewis (2018). The Bagnold Dunes in southern summer: Active sediment transport on Mars observed by the Curiosity rover. *Geoph. Res. Letters*, 45(17), 8853-8863, https://doi.org/10.1029/2018GL079040
19. Weitz, C.M., R. Sullivan, **M.G.A. Lapôtre**, S. Rowland, J. Grant, M. Baker, & A. Yingst (2018). Sand grain sizes and shapes in eolian bedforms at Gale crater, Mars. *Geoph. Res. Letters*, 45(18), 9471-9479, https://doi.org/10.1029/2018GL078972
18. **Lapôtre, M.G.A.**, R.C. Ewing, C.M. Weitz, K. Lewis, M.P. Lamb, B.L. Ehlmann, & D.M. Rubin (2018). Morphologic diversity of martian ripples: Implications for large-ripple formation. *Geoph. Res. Letters*, 45(19), 10229-10239, https://doi.org/10.1029/2018GL079029
17. **Lapôtre, M.G.A.**, & E.B. Rampe (2018). Curiosity's investigation of the Bagnold Dunes, Gale crater: Overview of the two-phase campaign and introduction to the special collection. *Geoph. Res. Letters*, 45(19), 10200-10210, https://doi.org/10.1029/2018GL079032
16. **Lapôtre, M.G.A.**, M.P. Lamb (2018). Substrate controls on valley formation by groundwater on Earth and Mars. *Geology*, 46(6), 531-534, https://doi.org/10.1130/G40007.1
15. Baker, M.M., C.E. Newman, **M.G.A. Lapôtre**, R. Sullivan, N.T. Bridges, K.W. Lewis (2018). Coarse sediment transport in the modern Martian environment. *J. Geophys. Res. Planets*, 123(6), 1380-1394, https://doi.org/10.1002/2017JE005513
14. Banham, S., S. Gupta, D. Rubin, J. Watkins, K.S. Edgett, D.Y. Sumner, J.P. Grotzinger, K. Lewis, L. Edgar, K. Stack, R. Barnes, J. Bell III, M.D. Day, R.C. Ewing, **M.G.A. Lapôtre**, N. Stein, F.

Rivera-Hernandez, A. Vasavada (2018). Ancient Martian aeolian processes and palaeogeomorphology reconstructed from the Stimson formation on the lower slope of Aeolis Mons, Gale crater, Mars. *Sedimentology,* 65(4), 993-1042, https://doi.org/10.1111/sed.12469

13. Conte, D., & 14 coauthors including **M.G.A. Lapôtre** (2017). Advanced concept for a crewed mission to the Martian moons. *Acta Astronautica*, 139, 545-563, https://doi.org/10.1016/j.actaastro.2017.07.044
12. Ewing, R.C., **M.G.A. Lapôtre**, K. Lewis, M. Day, N. Stein, D.M. Rubin, N.T. Bridges, R. Sullivan, W.W. Fischer, M.P. Lamb, S. Gupta (2017). Sedimentary processes of the Bagnold Dunes: Implications for the eolian rock record of Mars. *J. Geophys. Res. Planets*, 122(12), 2544-2573, https://doi.org/10.1002/2017JE005324
11. Ehlmann, B.L., K.S. Edgett, B. Sutter, C.N. Achilles, M.L. Litvak, **M.G.A. Lapôtre**, A.A. Fraeman, & 32 coauthors (2017). Chemistry, mineralogy, and grain size of the Bagnold Dune Field: A synthesis of MSL Curiosity rover observations. *J. Geophys. Res. Planets*, 122(12), 2510-2543, https://doi.org/10.1002/2017JE005267
10. Bridges, N.T., & 11 coauthors including **M.G.A. Lapôtre** (2017). Martian aeolian activity at the Bagnold Dunes, Gale crater: The view from the surface and orbit. *J. Geophys. Res. Planets*, 122(10), 2077-2110, https://doi.org/10.1002/2017JE005263
9. **Lapôtre, M.G.A.**, B.L. Ehlmann, S. Minson, R. Arvidson, F. Ayoub, A.A. Fraeman, R. Ewing, N. Bridges (2017). Compositional variations in sands of the Bagnold Dunes, Gale crater, Mars, from visible-shortwave infrared spectroscopy and comparison to ground-truth from the Curiosity rover. *J. Geophys. Res. Planets*, 122(12), 2489-2509, https://doi.org/10.1002/2016JE005133
8. **Lapôtre, M.G.A.**, B.L. Ehlmann, S. Minson (2017). A probabilistic approach to remote compositional analysis of planetary surfaces. *J. Geophys. Res. Planets*, 122(5), 983-1009, https://doi.org/10.1002/2016JE005248
7. **Lapôtre, M.G.A.**, M.P. Lamb, B. McElroy (2017). What sets the size of current ripples? *Geology*, 45(3), 243-246, https://doi.org/10.1130/G38598.1
6. Kreisch, C.D., J.A. O'Sullivan, R.E. Arvidson, D.V. Politte, L. He, N.T. Stein, J. Finkel, E.A. Guinness, M.J. Wolff, **M.G.A. Lapôtre** (2017). Regularization of Mars Reconnaissance Orbiter CRISM along-track oversampled hyperspectral imaging observations of Mars. *Icarus*, 282, 136-151, https://doi.org/10.1016/j.icarus.2016.09.033
5. **Lapôtre, M.G.A.**, R. Ewing, M.P. Lamb, W.W. Fischer, J. P. Grotzinger, D. Rubin, K. Lewis, M. Ballard, M. Day, S. Gupta, & 12 other coauthors (2016). Large wind ripples on Mars: A record of atmospheric evolution. *Science*, 353, 6294, 55-58, https://doi.org/10.1126/science.aaf3206
4. **Lapôtre, M.G.A.**, M.P. Lamb, R.M.E. Williams (2016). Canyon formation constraints on the discharge of catastrophic outburst floods on Earth and Mars. *J. Geophys. Res. Planets*, 121, 7, 1232-1263, https://doi.org/10.1002/2016JE005061
3. **Lapôtre, M.G.A.**, M. P. Lamb (2015). Hydraulics of floods upstream of horseshoe canyons and waterfalls. *J. Geophys. Res. Earth Surf.*, 120, 7, 1227-1250, https://doi.org/10.1002/2014JF003412
2. Arvidson, R.E. and 21 coauthors including **M.G.A. Lapôtre** (2015). Mars Reconnaissance Orbiter and Opportunity observations of Burns formation and underlying strata: Crater hopping at Meridiani Planum. *J. Geophys. Res. Planets*, 120, 3, 429-451, https://doi.org/10.1002/2014JE004686
1. Perron, J.T., P.W. Richardson, K.L. Ferrier, **M.G.A. Lapôtre** (2012). The root of branching river networks. *Nature*, 492, 100-103, https://doi.org/10.1038/nature11762

CONFERENCE ABSTRACTS

- *FIRST-AUTHORED*

Lapôtre, M.G.A., A. Ielpi (2020). An extraterrestrial perspective on river meandering: Martian fluvial deposits and their significance for early Mars. Submitted to *35th IAS Meeting of Sedimentology*.

Lapôtre, M.G.A. (2020). The pace of fluvial meanders on Mars and implications for the landing site of NASA's next Mars rover. *2020 U.S. Kavli Frontiers of Science Symposium*.

Lapôtre, M.G.A., A. Ielpi (2020). Deciphering the paleoenvironmental archives of Jezero crater through physical sedimentology: Orbiter-based predictions. *51st LPSC, Abstract #1521*.

Lapôtre, M.G.A., A. Ielpi (2019). Formation duration and intermittency of the western delta deposits of Jezero crater, Mars. *Bay Area Planetary Science Meeting 2019*.

Lapôtre, M.G.A., A. Ielpi (2019). The Western Jezero delta deposit as a quantitative paleoclimate record: Timescales and intermittency of surface flows on Early Mars. *EOS Trans. AGU*, P54C-08.

Lapôtre, M.G.A. and 32 coauthors (2019). Martian eolian science since the Eighth International Conference on Mars: Summary of advances and remaining questions. *Ninth International Conference on Mars*, #6201.

(*program highlight*) **Lapôtre, M.G.A.** (2019). When one planet is not enough: Making progress in geology using other planets as full scale experiments. *Geophysical Research Abstracts*, Vol. 21, EGU2019-3185, *EGU General Assembly 2019*.

Lapôtre, M.G.A., A. Ielpi (2019). Single-thread rivers without land plants: A model to interpret martian fluvial deposits. *50th LPSC, Abstract #22519.*

Lapôtre, M.G.A., A. Ielpi (2018). The meandering-river paradox(es) of Earth and Mars: Are plants really needed to make rivers meander? *EOS Trans. AGU*, EP32A-02.

Lapôtre, M.G.A., E.B. Rampe (2018). Curiosity's investigation of the Bagnold Dunes, Gale crater: Overview of a two-phase scientific campaign. *GSA Annual Meeting 2018*, Paper no. 54-3.

Lapôtre, M.G.A., R.C. Ewing, C.M. Weitz, K.W. Lewis, M.P. Lamb, B.L. Ehlmann, D.M. Rubin, N.T. Bridges (2018). Morphologic diversity of martian ripples: Implications for low-intensity transport as a mechanism for large-ripple formation. *10th International Conference on Aeolian Research*.

Lapôtre, M.G.A., E.B. Rampe (2018). Curiosity's investigation of the Bagnold Dunes, Gale crater: Overview of a two-phase scientific campaign. *10th International Conference on Aeolian Research*.

Lapôtre, M.G.A., M.P. Lamb (2017). The role of subsurface water in carving Hesperian amphitheater-headed valleys. *EOS Trans*. *AGU*, P33B-2877.

Lapôtre, M.G.A., R.C. Ewing, M.P. Lamb, C.M. Weitz, D. Rubin, N.T. Bridges, B.L. Ehlmann (2017). Morphological diversity of Martian eolian bedforms as revealed by the Curiosity rover at Gale crater, Mars. *GSA Annual Meeting 2017*, Paper no. 244-9.

Lapôtre, M.G.A., M.P. Lamb (2017). Did Hesperian amphitheater-headed valleys form by groundwater sapping? *48th LPSC, Abstract #2860*.

(invited) **Lapôtre, M.G.A.**, R.C. Ewing, M.P. Lamb, W.W. Fischer, J.P. Grotzinger, D. Rubin, K. Lewis, M. Ballard, M. Day, S. Gupta, S. Banham, N.T. Bridges (2016). Origin of the two scales of wind ripples on Mars. *EOS Trans*. *AGU*, EP24A-02.

Lapôtre, M.G.A., M.P. Lamb, R.C. Ewing, B. McElroy (2016). Uniting ripple-formation theory under water and winds: A universal scaling relation for the wavelength of fluid-drag ripples across fluids and planetary bodies. *EOS Trans*. *AGU*, EP43D-06.

Lapôtre, M.G.A., B.L. Ehlmann, S.E. Minson, R.E. Arvidson, F. Ayoub, A.A. Fraeman, R.C. Ewing, N.T. Bridges (2016). Compositional variations in sands of the Bagnold Dunes at Gale crater, Mars,

from visible-shortwave infrared spectroscopy and comparison to ground-truth from the Curiosity rover. *GSA Annual Meeting 2016*, Paper no. 140-12.

Lapôtre, M.G.A., R.C. Ewing, M.P. Lamb, W.W. Fischer, K. Lewis, M. Ballard, M. Day, D. Rubin, J.P. Grotzinger (2016). Orbital and in-situ observations in support of the existence of an unknown stable aeolian bedform regime on Mars. *47th LPSC*, Abstract #1510.

Lapôtre, M.G.A., B.L. Ehlmann, A.A. Fraeman, S.E. Minson, F. Ayoub, R.C. Ewing, R.E. Arvidson, N.T. Bridges (2016). A quantitative assessment of aeolian fractionation at the Bagnold Dunes of Gale crater, Mars, from orbit to the ground. *47th LPSC*, Abstract #1513.

Lapôtre, M.G.A., B.L. Ehlmann, S.E. Minson, F. Ayoub, R.E. Arvidson, J. Buz, A.A. Fraeman, N.T. Bridges, R.Ewing, D.M. Rubin (2015). Implications of active surface processes for the interpretation of the Martian sedimentary rock record: Aeolian sands, sediments, and their sources at Gale Crater. *GSA Annual Meeting 2015*, Paper no. 71-15.

Lapôtre, M.G.A., B.L. Ehlmann, F. Ayoub, S.E. Minson, N.T. Bridges, A.A. Fraeman, R.E. Arvidson, J.L. Eigenbrode, R.C. Ewing, J.R. Johnson (2015). The Bagnold dunes at Gale Crater - A key to reading the geologic record of Mount Sharp. *46th LPSC*, Abstract #1634.

Lapôtre, M.G.A., M.P. Lamb (2015). How much water on Hesperian Mars - Insights from canyon morphology. *ELSI 3rd International Symposium*, 'Life in the Universe', Tokyo, Japan. Abstract P3-03.

Lapôtre, M.G.A., M.P. Lamb (2014). Hydraulic reconstruction of canyon-carving floods on Earth and ancient Mars. *EOS Trans. AGU*, EP11B-04.

Lapôtre, M.G.A., B.L. Ehlmann, R.E. Arvidson, S.E. Minson, F. Ayoub, N.T. Bridges (2014). Two tales of Martian sands and dust. *8th International Conference on Mars*, Abstract #1126.

Lapôtre, M.G.A., M.P. Lamb (2014). Is the width of canyons a diagnostic indicator of the discharge of floods on Earth and Mars? *45th LPSC*, Abstract #1422.

Lapôtre, M.G.A., B.L. Ehlmann, R.E. Arvidson (2014). Quantitative mineralogic and granulometric inversion of Visible Near Infrared Spectra of Aeolian Bedforms on Mars. *45th LPSC*, Abstract #1431.

Lapôtre, M.G.A., M.P. Lamb (2013). Is canyon width a diagnostic indicator of the discharge of megafloods on Earth and Mars? *EOS Trans. AGU*, EP53A-0712.

Lapôtre, M.G.A., M.P. Lamb (2013). Hydraulics of outburst floods spilling over a steep-walled canyon: Implications for paleo-discharges on Mars. *Geophysical Research Abstracts*, Vol. 15, EGU2013-5761, *EGU General Assembly 2013*.

Lapôtre, M.G.A., M.P. Lamb, C. Haliday (2012). Flow focusing as a control on the width of canyons formed by outburst floods. *EOS Trans. AGU*, EP51A-0961.

Lapôtre, M.G.A., M.P. Lamb (2011). Hydraulic control on the width of waterfall escarpments on Earth and Mars. *7th TOPO-EUROPE Workshop*, Davos, Switzerland.

Lapôtre, M.G.A., O. Galland, M. Dabrowski (2010). Mechanics of saucer-shaped sills emplacement - Can we predict the crack deflection? *EOS Trans. AGU*, T23A-2234.

Lapôtre, M.G.A., C. Gerlein, C. Huber, J. Watkins, M. Manga (2009). Deformation of a buoyant bubble at low Reynolds number: A model of interaction between a plume head and a subducting slab. *EOS Trans. AGU*, T13B-1867.

- *OTHERS*

Burr, D. M., M. Day, L. Fenton, **M.G.A. Lapôtre**, L. Neakrase, C. Swann, I. Walker, I., & D. Williams (2020). Facilities for planetary aeolian experimental research: A draft white paper. Submitted to the *6th International Planetary Dunes Workshop*.

Ielpi, A. & **M.G.A. Lapôtre** (2020). Plants hold back the migration of river meanders. Submitted to *35th IAS Meeting of Sedimentology*.

Weitz, C. M., R. J. Sullivan, **M.G.A. Lapôtre**, S. K. Rowland, J. A. Grant, M. M. Baker, & R. A. Yingst (2020). Physical properties of sand grains in the Bagnold Dunes at Gale crater, Mars. *Submitted to 6th International Planetary Dunes Conference*.

Ewing, R. C. E., E. B. Rampe, B. H. N. Horgan, **M.G.A. Lapôtre**, M. Nachon, M. T. Thorpe, C. C. Bedford, P. Sinha, K. Mason, E. Champion, P. Gray, A. Soto, M. Faragalli, & E. Reid (2020). Overview and initial results of SAND-E: Semi-Autonomous Navigation for Detrital Environments. *51st LPSC, Abstract #2857*.

Champion, E., R. C. Ewing, M. Nachon, E. B. Rampe, B. H. N. Horgan, **M.G.A. Lapôtre**, M. T. Thorpe, C. C. Bedford, P. Sinha, K. Mason, M. Tice (2020). Investigating relationships between geochemistry and physical grain characteristics along a glacio-fluvial-aeolian sediment transport pathway using μXRF. *51st LPSC, Abstract #2883*.

Mason, K. G., R. C. Ewing, M. Nachon, E. B. Rampe, B. H. N. Horgan, **M.G.A. Lapôtre**, M. T. Thorpe, C. C. Bedford, P. Sinha, E. Champion (2020). Sediment sorting and rounding in a basaltic glacio-fluvio-aeolian environment: Þhórisjökull glacier, Iceland. *51st LPSC, Abstract #2720.*

Nachon, M., R. C. Ewing, F. Marcantonio, L. Romero, D. Schimmenti, M. Tice, E. B. Rampe, B. H. N. Horgan, **M.G.A. Lapôtre**, M. T. Thorpe, C. C. Bedford, K. Mason, P. Sinha, E. Champion, A. D. Harrington, & the SAND-E engineering team (2020). Dust from Mars-analog plains (Iceland): Physico-compositional properties as a function of grain-size fraction. *51st LPSC, Abstract #2250*.

Thorpe, M. T., E. B. Rampe, K. L. Siebach, C. C. Bedford, R. C. Ewing, R. Christofferson, P. Sinha, B. H. N. Horgan, **M.G.A. Lapôtre**, M. Nachon, K. Mason, E. Champion, & the SAND-E team (2020). Clay sediments from basaltic terrains: Implications for sedimentary processes on Mars. *51st LPSC, Abstract #1566*.

Bedford, C. C., E. B. Rampe, M. T. Thorpe, R. C. Ewing, B. H. N. Horgan, M. Nachon, **M.G.A. Lapôtre**, P. Sinha, K. Mason, E. Champion, E. Reid (2020). Identifying the products of volcano-ice interaction in basaltic sediments in Iceland and their implications for Mars. *51st LPSC, Abstract #2478*.

Rampe, E. B., R. C. Ewing, M. T. Thorpe, C. C. Bedford, B, Horgan, **M.G.A. Lapôtre**, P. Sinha, M. Nachon, K. Mason, E. Champion, P. Gray, A. Soto, & E. Reid (2020). Using XRD to characterize sediment sorting in a Mars analog glacio-fluvio-eolian basaltic sedimentary system in Iceland. *51st LPSC, Abstract #2365*.

Sinha, P., B. H. N. Horgan, R. C. Ewing, E. B. Rampe, **M.G.A. Lapôtre**, M. Nachon, M. Thorpe, A. Rudolph, C. Bedford, K. Mason, E. Champion, P. C. Gray, E. Reid & M. Faragalli (2020). Decorrelation stretches (DCS) of visible images as a tool for sedimentary provenance investigations on Earth and Mars. *51st LPSC, Abstract #1495*.

Sinha, P., B. H. N. Horgan, R. C. Ewing, E. B. Rampe, **M.G.A. Lapôtre**, M. Nachon, M. Thorpe, C. Bedford, K. Mason, E. Champion, P. C. Gray, E. Reid & M. Faragalli (2020). SAND-E: A Rover-Based Mars Analog Study of a Mafic Sedimentary Environment, Iceland. *Seventh International Conference on Mars Polar Science & Exploration*, Abstract #6056.

Ewing, R. C., E. B. Rampe, B. H. N. Horgan, **M.G.A. Lapôtre**, & 8 other coauthors (2019). SAND-E: Semi-Autonomous Navigation for Detrital Environments First Results. *EOS Trans. AGU*, EP24A-05.

Steelquist, A. T., G. Hilley, & **M.G.A. Lapôtre** (2019). Drainage initiation in bedrock landscapes. *EOS Trans. AGU*, EP53I-2247.

Ielpi, A., **M.G.A. Lapôtre** (2019). Evolution of land plants impacted global rates of meander migration and biogeochemial fluxes. *EOS Trans. AGU*, EP41A-02.

Chojnacki, M., L. Fenton, M. Banks, S. Silvestro, D. Vaz, A. Urso, R.C. Ewing, **M.G.A. Lapôtre** (2019). Wind-driven sand motion across Mars and implications from orbital analysis. *Ninth International Conference on Mars*, Abstract #6361.

Ielpi, A., **M.G.A. Lapôtre** (2019). Plant life hinders river meandering in the Bonneville Basin of Utah. *Geological Association of Canada – Mineralogical Association of Canada – International Association of Hydrogeologists Conference 2019*.

Ruangsirikulchai, A., K. Wilson, H.J. Hassenruck-Gudipati, **M.G.A. Lapôtre**, D.C. Mohrig (2019). Developmental History of Return-Flow Channels Caused by Hurricane Harvey at San Jose Island, Texas, USA. *Geophysical Research Abstracts*, Vol. 21, EGU2019-1475, *EGU General Assembly 2019*.

Rampe, E.B., T.F. Bristow, D.F. Blake, D.T. Vaniman, **M.G.A. Lapôtre**, & 22 other coauthors (2019). Mineralogy of modern regolith and ancient sedimentary deposits in Gale crater, Mars from the Curiosity rover. *2019 Soil Science Society of America Meeting*, Abstract #148-1.

Ruangsirikulchai, A., K. Wilson, H.J. Hassenruck-Gudipati, **M.G.A. Lapôtre**, D.C. Mohrig (2018). Evolution of return-flow channels cut into San Jose Island, Texas, caused by hurricane Harvey. *EOS Trans. AGU*, EP23C-2347.

Ewing, R.C., & 6 other coauthors including **M.G.A. Lapôtre** (2018). Overview of SAND-E: Semi-Autonomous Navigation for Detrital Environments. *EOS Trans. AGU*, P51C-11.

(*invited*) Baker, M.M., C.E. Newman, **M.G.A. Lapôtre**, K.W. Lewis, M.E. Minitti, R. Sullivan, A. Vasavada, C.M. Weitz, D.M. Rubin, & N.T. Bridges (2018). Characterizing the modern-day Aeolian environment at Gale crater, Mars. *EOS Trans. AGU*, EP43A-08.

Rampe., E.B., **M.G.A. Lapôtre**, & 27 coauthors (2018). Using Mineralogy of the Bagnold Dune Field in Gale Crater to Interpret Eolian Sediment Sorting on the Martian Surface. *GSA Annual Meeting 2018*, Paper no. 54-2.

Kurokawa, H., B.L. Ehlmann, E. Ammanito, M.C. De Sanctis, **M.G.A. Lapôtre**, T. Usui, N.T. Stein, T. Prettyman, A. Raponi, & M. Ciarniello (2018). A probabilistic approach to deriving Ceres average surface composition from Dawn VIR data. *JpGU 2018*, MIS18-P10.

Kurokawa, H., B.L. Ehlmann, E. Ammanito, M.C. De Sanctis, **M.G.A. Lapôtre**, T. Usui, N.T. Stein, T. Prettyman, A. Raponi, & M. Ciarniello (2018). A Bayesian approach to deriving Ceres surface composition from Dawn VIR data: Initial quantification of bright spot and typical dark material phases with this method. *49th LPSC, Abstract #1908.*

Rampe, E.B., T.F. Bristow, D.F. Blake, D.T. Vaniman, C.N. Achilles, N. Castle, S.J. Chipera, P.I. Craig, D.J. Des Marais, R.T. Downs, J. Farmer, R. Hazen, B. Horgan, **M.G.A. Lapôtre**, D.W. Ming, R.V. Moris, S.M. Morrison, T.S. Peretyazhko, A.H. Treiman, V. Tu, & A.S. Yen (2018). Mineralogy of Aeolian sand in Gale crater, Mars. *49th LPSC, Abstract #1654.*

Weitz, C.M., R.J. Sullivan, **M.G.A. Lapôtre**, S.K. Rowland, K.S. Edgett, J.A. Grant, & R.A. Yingst (2018). Grain size measurements of eolian ripples in Gale crater, Mars. *49th LPSC, Abstract #1257.*

(*invited*) Lamb, M.P., **M.G.A. Lapôtre**, I.J. Larsen, & R.M.E. Williams (2017). Bedrock canyons carved by the largest known floods on Earth and Mars. *EOS Trans. AGU*, U43A-03.

(*invited*) Ehlmann, B.L., K.S. Edgett, B. Sutter, C.N. Achilles, M.L. Litvak, **M.G.A. Lapôtre**, & 34 other coauthors (2017). The sands of the Bagnold Dunes, Mars. *EOS Trans*. *AGU*, P51H-10.

Baker, M., **M.G.A. Lapôtre**, N.T. Bridges, M. Minitti, C. Newman, B.L. Ehlmann, A. Vasavada, K. Lewis (2017). The Bagnold Dunes in the southern summer season: Active sediment transport on Mars observed by MSL. *EOS Trans*. *AGU*, P33F-04.

Weitz, C.M., R. Sullivan, **M.G.A. Lapôtre**, S. Rowland, K.S. Edgett, J.A. Grant, R.A. Yingst (2017). Grain size measurements of eolian ripples in Gale crater, Mars. *EOS Trans*. *AGU*, P31A-2787.

Banham, S., S. Gupta, D. Rubin, J. Watkins, K.S. Edgett, D.Y. Sumner, J.P. Grotzinger, K. Lewis, L. Edgar, K. Stack, R. Barnes, J. Bell III, M.D. Day, R.C. Ewing, **M.G.A. Lapôtre**, N. Stein, F. Rivera-Hernandez, A. Vasavada (2017). From lakes to sand seas: A record of early Mars climate change explored in northern Gale crater, Mars. *EOS Trans*. *AGU*, P33F-02.

Ewing, R.C., **M.G.A. Lapôtre**, K. Lewis, M.D. Day, N.T. Stein, D.M. Rubin, R. Sullivan, S.G. Banham, M.P. Lamb, N.T. Bridges, S. Gupta, W.W. Fischer (2017). Relating sedimentary processes in the Bagnold Dunes to the development of crater basin aeolian stratification. *EOS Trans*. *AGU*, B23A-2051.

Ewing, R.C., **M.G.A. Lapôtre**, K. Lewis, M.D. Day, N.T. Stein, D.M. Rubin, R. Sullivan, S.G. Banham, M.P. Lamb, N.T. Bridges, S. Gupta, W.W. Fischer (2017). Relating sedimentary processes in the Bagnold Dunes to the development of crater basin aeolian stratification. *GSA Annual Meeting 2017*, Paper no. 24-4.

Lamb, M.P., **M.G.A. Lapôtre**, I.J. Larsen, & R.M.E. Williams (2017). Morphodynamics of bedrock canyons carved by megafloods. *10th Symposium on River, Coastal and Estuarine Morphodynamics*, Padova, Italy.

Banham, S.G., S. Gupta, D.M. Rubin, J.A. Watkins, D.Y. Sumner, J.P. Grotzinger. K.W. Lewis, K.S. Edgett, L.A. Edgar, K.M Stack, J. Bell, R. Ewing, M.D. Day, & **M.G.A. Lapôtre** (2017). Anatomy of an ancient eolian sandstone on Mars: The Stimson formation in Gale crater. *2017 National Astronomy Meeting*, Hull, UK.

Baker, M., K.W. Lewis, N.T. Bridges, C. Newman, J. Van Beek, **M.G.A. Lapôtre** (2017). Aeolian transport of coarse sediment in the modern martian environment. *Dust in the Atmosphere of Mars and Its Impact on Human Exploration workshop*, Houston, TX, Abstract #6021.

Bridges, N.T., B.L. Ehlmann, C. Achille, A. Cousin, C. Edwards, R. Ewing, J. Johnson, **M.G.A. Lapôtre**, C. Newman, C. O'Connel-Cooper, D. Rubin, R. Sullivan (2017). Investigation of the Bagnold Dunes by the Curiosity rover: Summary of results from the first investigation of an active dune field on another planet. *5th International Planetary Dunes Workshop*, St. George, UT, Abstract #3031.

Banham, S.G., S. Gupta, D.M. Rubin, J.A. Watkins, D.Y. Sumner, J.P. Grotzinger. K.W. Lewis, K.S. Edgett, L.A. Edgar, K.M Stack, J. Bell, R. Ewing, M.D. Day, & **M.G.A. Lapôtre** (2017). Anatomy of an ancient eolian sandstone on Mars: The Stimson formation in Gale crater. *5th International Planetary Dunes Workshop*, St. George, UT, Abstract #3039.

(*invited*) Lamb, M.P., **M.G.A. Lapôtre**, I.J. Larsen, & R.M.E. Williams (2017). Erosional threshold for the formation of bedrock canyons carved by megafloods on Earth and Mars. Geophysical Research Abstracts, Vol. 19, EGU2017-614, *EGU General Assembly 2017*.

Achilles, C.N., R.T. Downs, D.W. Ming, E.B. Rampe, R.V. Morris, A.H. Treiman, S.M. Morrison, D.F. Blake, D.T. Vaniman, R.C. Ewing, S.J. Chipera, A.S. Yen, T.F. Bristow, B.L. Ehlmann, **M.G.A. Lapôtre**, R. Gellert, R.M. Hazen (2017). Ground-truth mineralogy vs. orbital observations at the Bagnold Dune Field. *48th LPSC, Abstract #2889*.

Bridges, N.T., R. Sullivan, C.E. Newman, S. Navarro, J. van Beek, R.C. Ewing, F. Ayoub, S. Silvestro, O. Gasnault, S. Le Mouelic, **M.G.A. Lapôtre**, W. Rapin (2017). Martian aeolian activity at the Bagnold Dunes, Gale crater: The view from the surface and orbit. *48th LPSC, Abstract #1983*.

Banham, S.G., S. Gupta, D.M. Rubin, J.A. Watkins, D.Y. Sumner, J.P. Grotzinger, K.W. Lewis, K.S. Edgett, L.A. Edgar, K.M. Stack, J. Bell, M.D. Day, R.C. Ewing, **M.G.A. Lapôtre** (2017). The Stimson formation: Determining the morphology of a dry aeolian dune system and its climatic significance in Gale crater, Mars. *48th LPSC, Abstract #2014*.

Ballard, M.J., R.C. Ewing, & **M.G.A. Lapôtre** (2017). Variations in bedform wavelength by elevation on Mars. *48th LPSC, Abstract #2430.*

Ehlmann, B.L., S.S. Johnson, B. Horgan, P.B. Niles, E.S. Amador, P.D. Archer, Jr, S. Byrne, C.S. Edwards, A.A. Fraeman, D.P. Glavin, T.D. Glotch, C. Hardgrove, P.O. Hayne, E.S. Kite, N.L. Lanza, **M.G.A. Lapôtre**, J. Michalski, M. Rice, A.D. Rogers (2017). Mars exploration science in 2050. *Planetary Science Vision 2050 Workshop*, Abstract #8236.

Bridges, N.T., R. Sullivan, R.C. Ewing, C.E. Newman, F. Ayoub, **M.G.A. Lapôtre**, & J. Van Beek (2016). Sand dune dynamics on Mars: Integration of surface imaging, wind measurements, and orbital remote sensing. *EOS Trans. AGU*, EP24A-05.

(invited) Ewing, R.C., N.T. Bridges, R. Sullivan, **M.G.A. Lapôtre**, W.W. Fischer, M.P. Lamb, D.M. Rubin, K. Lewis, S. Gupta (2016). Aeolian sedimentary processes at the Bagnold Dunes Mars: Implications for modern dune dynamics and sedimentary structures in the aeolian stratigraphic record of Mars. *GSA Annual Meeting 2016*, Paper no. 140-3.

Baker, M.M., K. Lewis, **M.G.A. Lapôtre**, C.E. Newman, J. Van Beek, & N.T. Bridges (2016). Aeolian transport of coarse sediment in the modern martian environment. *GSA Annual Meeting 2016*, Paper no. 140-9.

Gupta, S., S. Banham, D. Rubin, J. Watkings, D.Y. Sumner, J.P. Grotzinger, K. Lewis, K.S. Edgett. L. Edgar, K. Stack, M. Day, R. Ewing, **M.G.A. Lapôtre** (2016). Anatomy of an ancient aeolian sandstone on Mars: The Stimson formation, Gale crater, Mars. *48th DPS Annual Meeting*, Abstract 507.01.

Ehlmann, B.L., N.T. Bridges, A.A. Fraeman, **M.G.A. Lapôtre**, K.S Edgett, J.R. Johnson, A. Cousin, A.S. Yen, P. Conrad, L. Thompson, J. Van Beek, D, Vaniman, S. Schroder, A. Vasavada, & the MSL Science Team (2016). Chemistry and mineralogy in-situ at the Bagnold sand dunes: Evidence for aeolian sorting and size-dependence in sand composition. *47th LPSC,* Abstract #1536.

Ewing, R.C., N.T. Bridges, R. Sullivan, **M.G.A. Lapôtre**, W.W. Fischer, M.P. Lamb, D. Rubin, K.W. Lewis, S. Gupta (2016). Aeolian sedimentary processes at the Bagnold Dunes, Mars: Implications for modern dune dynamics and sedimentary structures in the aeolian stratigraphic record of Mars. *47th LPSC*, Abstract #2783.

Bridges N.T., B.L. Ehlmann, R.C. Ewing, C.E. Newman, R. Sullivan, P.G. Conrad, A. Cousin, K.S. Edgett, M.R. Fisk, A.A. Fraeman, J.R. Johnson, M.P. Lamb, **M.G.A. Lapôtre**, S. Le Mouelic, G.M. Martinez, P.-Y. Meslin, P. Pinet, L.M. Thompson, J. Van Beek, A.R. Vasavada, R.C. Wiens (2016). Investigation of the Bagnold Dunes by the Curiosity rover: Overview of initial results from the first study of an active dune field on another planet. *47th LPSC*, Abstract #2298.

Achilles, C.N., D.T. Vaniman, D.F. Blake, T.F. Bristow, E.B. Rampe, D.W. Ming, S.J. Chipera, R.V. Morris, S.M. Morrison, R.T. Downs, K.V. Fendrich, B.L. Ehlmann, A.S. Yen, P.C. Sarrazin, A.H. Treiman, P.I. Craig, **M.G.A. Lapôtre**, K.S. Edgett, R. Gellert, J.A. Crisp, J.M. Morookian, J.P. Grotzinger, D.J. Des Marais, J.D. Farmer (2016). Mineralogy of eolian sands at Gale crater. *47th LPSC*, Abstract #2532.

Baker, M., K.W. Lewis, N.T. Bridges, C.E. Newman, J. Van Beek, **M.G.A. Lapôtre** (2016). Aeolian transport of coarse sediment in the modern martian environment. *47th LPSC,* Abstract #2894.

Ballard, M., R.C. Ewing, **M.G.A. Lapôtre** (2016). Variations in bedform wavelength by elevation on Mars. *47th LPSC,* Abstract #2977.

Ewing, R.C., N.T. Bridges, R. Sullivan, **M.G.A. Lapôtre**, W.W. Fischer, M.P. Lamb, D. Rubin, K.W. Lewis, S. Gupta (2016). Aeolian sedimentary processes at the Bagnold Dunes, Mars: Implications for modern dune dynamics and sedimentary structures in the aeolian stratigraphic record of Mars. Geophysical Research Abstracts, Vol. 18, EGU2016-10731, *EGU General Assembly 2016*.

Bridges N.T., B.L. Ehlmann, R.C. Ewing, C.E. Newman, R. Sullivan, P.G. Conrad, A. Cousin, K.S. Edgett, M.R. Fisk, A.A. Fraeman, J.R. Johnson, M.P. Lamb, **M.G.A. Lapôtre**, S. Le Mouelic, G.M. Martinez, P.-Y. Meslin, L.M. Thompson, J. Van Beek, A.R. Vasavada, R.C. Wiens (2016). Overview of initial results from studies of an active dune field on Mars by the Curiosity rover. Geophysical Research Abstracts, Vol. 18, EGU2016-9711, *EGU General Assembly 2016*.

Rubin, D.M., R.C. Ewing, **M.G.A. Lapôtre**, S.G. Banham, S. Gupta, J.P. Grotzinger (2016). Comparison of cross-bedding in eolian dunes in the Namib Desert and the eolian Stimson sandstone in Gale crater, Mars. *35th International Geological Congress, Cape Town, SA*.

Banham, S.G., S. Gupta, & others including **M.G.A. Lapôtre** (2016). Sedimentary architecture and evolution of the Stimson formation: Reconstruction of aeolian environments in Mars' early history. *32nd IAS Meeting of Sedimentology,* Abstract #340.

Ehlmann, B.L., C.N. Achilles, N.T. Bridges, P. Conrad, A. Cousin, K. Edgett, A.A. Fraeman, J.R. Johnson, **M.G.A. Lapôtre**, M. Litvak, S. Rowland, S. Schroder, B. Sutter, N. Stein, L. Thompson, J. Van Beek, D, Vaniman, A. Vasavada, A. Yen, & the MSL Science Team (2016). Chemistry and mineralogy in-situ at the Bagnold dunes, Gale Crater: Evidence for size-dependence in martian sand composition. *Goldschmidt Conference 2016, Yokohama, Japan*.

Achilles, C.N., R.T. Downs, D.T. Vaniman, D.F. Blake, R.V. Morris, D.W. Ming, A.S. Yen, E.B. Rampe, T.F. Bristow, S.J. Chipera, S.M. Morrison, A.H. Treiman, K.V. Fendrich, P.C. Sarrazin, P.I. Craig, B.L. Ehlmann, **M.G.A. Lapôtre**, K.S. Edgett, R. Gellert, J.A. Crisp, J.P. Grotzinger, D.J. Des Marais, J.D. Farmer, J.M. Morookian (2016). Mineralogy of eolian sands at Gale crater, Mars. *Goldschmidt Conference 2016, Yokohama, Japan.*

Fraeman, A.A., R.E. Arvidson, B.L. Ehlmann, B. Clark, A. Cousin, D. Des Marais, R. Gellert, J.R. Johnson, **M.G.A. Lapôtre**, S. Schröder, N. Stein, R. Sullivan, D. Welington (2015). Physical and material properties of Gale Crater sandy deposits: From Rocknest to Parhump. *46th LPSC,* Abstract # 1682.

Bridges, N.T. and 20 coauthors including **M.G.A. Lapôtre** (2015). Investigation of the Bagnold Dunes by the Curiosity rover: Plans for the first study of an active dune field on another planet. *4th International Planetary Dunes Workshop,* Abstract #8028.

Bridges, N.T., R.E. Arvidson, F. Ayoub, B.L. Ehlmann, A.A. Fraeman, **M.G.A. Lapôtre**, J. Martin-Torres, H. Newsom, D. Rubin, R. Sullivan (2014). Studies of Aeolian Bedforms and Wind Activity in Gale Crater from Surface to Orbital Scales. *GSA Annual Meeting 2014*, Paper no. 202-12.

(*invited*) Lamb, M.P., B. Mackey, M. Fonstad, **M.G.A. Lapôtre**, K. Farley (2012). Rapid canyon formation by extreme floods. *EOS Trans. AGU,* EP53I-03.

(i*nvited*) Woods, A.W. and the students of the BP Institute (2011). The intrusion of buoyant plumes in the energy industry, *Wyss Lecture*, Harvard University.

Perron, J.T., P.W. Richardson, **M.G.A. Lapôtre**, K. Ferrier (2011). Reading rock types, climate, and life from emergent patterns in landscapes. *24th Kongsberg Seminar,* Norway.

Galland, O., **M.G.A. Lapôtre**, E.-R. Neumann, S. Plank (2011). Experimental modelling of ground deformation above shallow magma intrusion. *Volcanic and Magmatic Studies Group Annual Meeting*, Cambridge, UK.

(*invited*) Perron, J.T., **M.G.A. Lapôtre** (2010). The branching instability in valley networks. *EOS Trans. AGU*, H41J-02.

OUTREACH

- Movie night, Department of Geological Sciences, Stanford. Screening of "The Martian" followed by Q&A about Mars geology and exploration.
- Interviewee and science consultant for BBC (UK) and NOVA (USA) Science Documentary Series *The Planet*s, Episode *Mars*. The series was broadcasted in the Summer of 2019 (UK/USA).
- Volunteer at the Planetary Geology Division Booth at the GSA Annual Meetings in 2015 (Baltimore, MD), 2016 (Denver, CO), and at the LPSC 2017. Presented various orbital datasets to a general audience. Answered questions about planets and moons of the solar system.
- Volunteer at the Curiosity Landing Planetfest 2012, Pasadena. Answered questions about Mars and its geologic history to a general audience.

MEDIA COVERAGE

- What other planets can teach us about Earth: Stanford researchers explain, *Stanford News, Stanford Earth Matters* (03/2020).
- Fact or fiction? The science of Star Wars, *Stanford Earth Matters* (12/2019).
- A tenfold slowdown in river meander migration driven by plant life, *SciGlow* (12/2019).
- Seeing Mars in a grain of sand, *EOS*, (10/2018).
- A rover's eye view of moving Martian dunes, *EOS* (11/2017).
- Curiosity rover spies shifting sands on Mars, *EOS* (06/2017).
- NASA rover samples active linear dune on Mars, *NASA* (05/2017).
- Gloopy fluid makes bigger ripples, *The Guardian* (02/2017).
- Reconstructing catastrophic floods on Earth and Mars, *EOS* (07/2016).
- Lapôtre et al. (2016) "Large wind ripples on Mars: A record of atmospheric evolution" was covered by multiple news outlets including the *Wall Street Journal*, the *Washington Post*, *Time Magazine*, the *Daily News*, *Popular Mechanics*, *Space.com*, & *Natural History Magazine*.
- Sandy ripples point to Mars's past, *Science* (04/2016).
- Comment les bassins des rivières évoluent ("How do river basins evolve?"), interview for *Pour la Science* (03/2014).
- Comment leur forme vient aux rivieres? Interview about *Perron et al.* (2012), *Le Temps* (12/2012).
- Pourquoi les rivières ne sont pas de longs fleuves tranquilles? Interview about *Perron et al.* (2012) for *Le Monde*, no. 21121 (12/2012).