

J. Taylor Perron

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DEGREES

PhD, Earth & Planetary Science, University of California, Berkeley, 2006
AB, Earth & Planetary Sciences and Archaeology, Harvard University, 1999

EMPLOYMENT

2014– Associate Professor of Geology, Massachusetts Institute of Technology
2009–2013 Assistant Professor of Geology, Massachusetts Institute of Technology
2007–2008 R. A. Daly Postdoctoral Fellow, Harvard University
2000–2006 Research and Teaching Assistant, UC Berkeley
1999–2000 Intern, U. S. Geological Survey

AWARDS AND HONORS

James B. Macelwane Medal, American Geophysical Union, 2014
Fellow, American Geophysical Union, 2014
Clint Slatton Award, National Center for Airborne Laser Mapping, 2013
Robert P. Sharp Lecturer, American Geophysical Union, 2011
Luna B. Leopold Young Scientist Award, American Geophysical Union, 2011
Cecil & Ida Green Career Development Chair, MIT, 2010–2013
Fellow, Canadian Institute for Advanced Research, 2010
AGU Editors' Citation for Excellence in Refereeing, 2009
Kavli Frontiers of Science Fellow, National Academy of Sciences, 2007
Louderback award in Geology & Geophysics, UC Berkeley, 2003
AGU Outstanding Student Paper Award, Planetary Sciences, 2002
National Science Foundation Graduate Fellowship, 2002–2005
Hoopes Thesis Prize, Harvard University, 1999
National Merit Scholar, 1995

PUBLICATIONS

Click on DOIs for online versions of papers, or visit <http://mit.edu/perron/www> for electronic reprints. Citation metrics available from Google at <http://goo.gl/WXFXrD>.

* = MIT student/postdoc author

Articles

61. Perron, J.T. (2017). Climate and the pace of erosional landscape evolution. *Annual Review of Earth and Planetary Sciences*, 45, in press.
60. Perron, J.T. and J.G. Venditti (2017). Megafloods Downsized. *Nature*, 538, 174–175, <http://dx.doi.org/10.1038/538174a>.
59. Gabet, E.J., J.L.H. Burnham and J.T. Perron (2016), Critiques of the seismic hypothesis and the vegetation stabilization hypothesis for the formation of Mima mounds along the western coast of the US, *Geomorphology*, 269, 40–42, <http://dx.doi.org/10.1016/j.geomorph.2016.06.032>.
58. Toomey, M.R., M.E. Raymo, A.D. Ashton and J.T. Perron (2016), Late Cenozoic sea level and the rise of modern rimmed atolls, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 451, 73–83, <http://dx.doi.org/10.1016/j.palaeo.2016.03.018>.
57. Toomey, M.R., J.D. Woodruff, J.P. Donnelly, A.D. Ashton and J.T. Perron (2016), Seismic evidence of glacial-age river incision into the Tahaa barrier reef, French Polynesia, *Marine Geology*, 380, 284–289, <http://dx.doi.org/10.1016/j.margeo.2016.04.008>.
56. *Mariotti, G., S. Pruss, X. Ai, J.T. Perron and T. Bosak (2016). Microbial origin of early animal trace fossils? *J. Sedimentary Research*, 86, 287–293, <http://dx.doi.org/10.2110/jsr.2016.19>.
55. St. Clair, J., *S. Moon, W.S. Holbrook, J.T. Perron, C.S. Riebe, S.J. Martel, B. Carr, C. Harmon, K. Singha and D. deB. Richter (2015). Geophysical imaging reveals topographic stress control of bedrock weathering, *Science*, 350, 534–538, <http://dx.doi.org/10.1126/science.aab2210>.
54. *Bellugi, D., D. Milledge, W.E. Dietrich, J.T. Perron and J. McKean (2015), Predicting shallow landslide size and location across a natural landscape: Application of a spectral clustering search algorithm, *J. Geophys. Res.*, <http://dx.doi.org/10.1002/2015JF003520>.
53. *Huppert, K.L., L.H. Royden and J.T. Perron (2015), Dominant influence of volcanic loading on vertical motions of the Hawaiian Islands, *EPSL*, 418, 149–171, <http://dx.doi.org/10.1016/j.epsl.2015.02.027>.
52. Perron, J.T. (2015). The wind in the hollows. *Nature Geosci.*, 8, 254–255, <http://dx.doi.org/10.1038/ngeo2389>.
51. *Bellugi, D., D. Milledge, W.E. Dietrich, J. McKean, J.T. Perron, E. Sudderth and

- B. Kazian (2015), A spectral clustering search algorithm for predicting shallow landslide size and location, *J. Geophys. Res.*, 120, 300–324, <http://dx.doi.org/10.1002/2014JF003137>.
50. *Slim, M., J.T. Perron, S.J. Martel and K. Singha (2015), Topographic stress and rock fracture: A two-dimensional numerical model for arbitrary surface topography and comparisons with borehole observations. *Earth Surface Processes and Landforms*, 40, 512–529, <http://dx.doi.org/10.1002/esp.3646>.
49. *Nienhuis, J.H., J.T. Perron, *J.C.T. Kao and P.M. Myrow (2014), Wavelength selection and symmetry breaking in orbital wave ripples, *J. Geophys. Res.*, 119, 2239–2257, <http://dx.doi.org/10.1002/2014JF003158>.
48. *Mariotti, G., S. Pruss, J.T. Perron and T. Bosak (2014), Microbial shaping of sedimentary wrinkle structures, *Nature Geoscience*, 7, 736–740, <http://dx.doi.org/10.1038/ngeo2229>.
47. *Richardson, A., C. Hill and J.T. Perron (2014), IDA: An implicit, parallelizable method for calculating drainage area. *Water Resources Research*, 50, 4110–4130, <http://dx.doi.org/10.1002/2013WR014326>.
46. *Mariotti, G., J.T. Perron and T. Bosak (2014), Feedbacks between flow, sediment motion and microbial growth on sand bars initiate and shape elongated stromatolite mounds. *EPSL*, 397, 93–100, <http://dx.doi.org/10.1016/j.epsl.2014.04.036>.
45. *Sori, M., J.T. Perron, P. Huybers and O. Aharonson (2014), A procedure for testing the significance of orbital tuning of the Martian polar layered deposits. *Icarus*, 235, 136–146, <http://dx.doi.org/10.1016/j.icarus.2014.03.009>.
44. Willett, S.D., *S.W. McCoy, J.T. Perron, L. Goren and C.Y. Chen (2014), Dynamic reorganization of river basins. *Science*, 343 (6175), 1248765, <http://dx.doi.org/10.1126/science.1248765>.
43. Jefferson, A.J., *K.L. Ferrier, J.T. Perron, and R. Ramalho (2014), Controls on the Hydrological and Topographic Evolution of Shield Volcanoes and Volcanic Ocean Islands, in *The Galápagos: A Natural Laboratory for the Earth Sciences* (eds K. S. Harpp, E. Mittelstaedt, N. d'Ozouville and D. W. Graham), John Wiley & Sons, Inc, Hoboken, New Jersey, 185–213, <http://dx.doi.org/10.1002/9781118852538.ch10>.
42. Gabet, E.J., J.T. Perron and D.L. Johnson (2014), Biotic origin for Mima mounds supported by numerical model. *Geomorphology*, 206, 58–66, <http://dx.doi.org/10.1016/j.geomorph.2013.09.018>.
41. Aharonson, O., A.G. Hayes, R. Lopes, A. Lucas, P. Hayne and J.T. Perron (2014), Titan's Surface Geology. In *Titan: Interior, Surface, Atmosphere and Space Environment*, edited by I. Mueller-Wodarg, C. Griffith, E. Lellouch, and T. Cravens, Cambridge University Press, ISBN:9780521199926, 63–101. <http://mit.edu/perron/www/files/Aharonson13.pdf>
40. Bosak, T., *G. Mariotti, F.A. Macdonald, J.T. Perron and S.B. Pruss (2013), Microbial sedimentology of stromatolites in Neoproterozoic cap carbonates. In

Ecosystem Paleobiology and Geobiology, Paleontological Special Papers Volume 19, Volume 19, A.M. Bush, S.B. Pruss, and J.L. Payne (eds.), 51–75.

<http://mit.edu/perron/www/files/Bosak13.pdf>

39. *Tewelde, Y., J.T. Perron, P.G. Ford, S.R. Miller and *B.A. Black (2013), Estimates of fluvial erosion on Titan from sinuosity of lake shorelines. *J. Geophys. Res.*, 118, 2198–2212, <http://dx.doi.org/10.1002/jgre.20153>.
38. Burr, D.M., S.A. Drummond, R. Cartwright, *B.A. Black and J.T. Perron (2013), Morphology of fluvial features on Titan: Evidence for structural control. *Icarus*, 226, 742–759, <http://dx.doi.org/10.1016/j.icarus.2013.06.016>.
37. *Ferrier, K.L., *K.L. Huppert and J.T. Perron (2013), Climatic control of bedrock river incision. *Nature*, 496, 206–209, <http://dx.doi.org/10.1038/nature11982>.
36. *Toomey, M., A.D. Ashton and J.T. Perron (2013), Profiles of ocean island coral reefs controlled by sea-level history and carbonate accumulation rates. *Geology*, 41, 731–734, <http://dx.doi.org/10.1130/G34109.1>.
35. Dalca, A.V., K.L. Ferrier, J.X. Mitrovica, J.T. Perron, G.A. Milne, and J.R. Creveling (2013), On post-glacial sea level, III: Incorporating sediment redistribution. *Geophys. J. Int.*, 194, 45–60, <http://dx.doi.org/10.1093/gji/ggt089>.
34. *Ferrier, K.L., J.T. Perron, S. Mukhopadhyay, M. Rosener, J.D. Stock, *K.L. Huppert and *M. Slosberg (2013), Covariation of climate and long-term erosion rates across a steep rainfall gradient on the Hawaiian island of Kaua'i. *GSA Bulletin*, 125, 1146–1163, <http://dx.doi.org/10.1130/B30726.1>.
33. Royden, L. and J.T. Perron (2013), Solutions of the stream power equation and application to the evolution of river longitudinal profiles. *J. Geophys. Res.*, 118, 497–518, <http://dx.doi.org/10.1002/jgrf.20031>.
32. Perron, J.T. and L. Royden (2013), An integral approach to bedrock river profile analysis. *Earth Surface Processes and Landforms*, 38, 570–576, <http://dx.doi.org/10.1002/esp.3302>.
31. Burr, D.M., J.T. Perron, M.P. Lamb, R.P. Irwin, G.C. Collins, A.D. Howard, L.S. Sklar, J.M. Moore, M. Adamkovic, V.R. Baker, S.A. Drummond and *B.A. Black (2013), Fluvial features on Titan: Insights from morphology and modeling. *GSA Bulletin*, 125, 299–321, <http://dx.doi.org/10.1130/B30612.1>.
30. Perron, J.T., *P.W. Richardson, *K.L. Ferrier, and *M. Lapôtre (2012), The root of branching river networks. *Nature*, 492, 100–103, <http://dx.doi.org/10.1038/nature11672>.
29. Lee, J.-E., B.R. Lintner, J.D. Neelin, X. Jiang, C.K. Boyce, J.B. Fisher, J.T. Perron, T.L. Kubar, R.T. Pierrehumbert, J. Lee and J. Worden (2012), Reduction of tropical land region precipitation variability via transpiration. *Geophys. Res. Lett.*, 39, L19704, <http://dx.doi.org/10.1029/2012GL053417>.
28. *Black, B.A., J.T. Perron, D.M. Burr and S.L. Drummond (2012), Estimating

- erosional exhumation on Titan from drainage network morphology. *J. Geophys. Res.*, 117, E08006, <http://dx.doi.org/10.1029/2012JE004085>.
27. Limaye, A.B.S., O. Aharonson and J.T. Perron (2012), Detailed stratigraphy and bed thickness of the Mars north and south polar layered deposits. *J. Geophys. Res.*, 117, E06009, <http://dx.doi.org/10.1029/2011JE003961>.
26. Lamb, M.P., W.W. Fischer, T.D. Raub, J.T. Perron and P.M. Myrow (2012), Origin of giant wave ripples in Snowball Earth cap carbonate. *Geology*, 40, 827–830, <http://dx.doi.org/10.1130/G33093.1>.
25. Pelletier, J.D. and J.T. Perron (2012), Analytic solution for the morphology of a soil-mantled valley undergoing steady headward growth: Validation using case studies in southeastern Arizona. *J. Geophys. Res.*, 117, F02018, <http://dx.doi.org/10.1029/2011JF002281>.
24. Perron, J.T. and *J. Hamon (2012), Equilibrium form of horizontally retreating, soil-mantled hill-slopes: Model development and application to a groundwater sapping landscape. *J. Geophys. Res.*, 117, F01027, <http://dx.doi.org/10.1029/2011JF002139>.
23. *Blackburn, T.J., S.A. Bowring, J.T. Perron, K.H. Mahan, F.O. Dudas and K.R. Barnhart (2012), An exhumation history of continents over billion-year time scales. *Science*, 335, 73–76, <http://dx.doi.org/10.1126/science.1213496>.
22. Perron, J.T. and S. Fagherazzi (2012), The legacy of initial conditions in landscape evolution. *Earth Surface Processes & Landforms*, 37, 52–63, <http://dx.doi.org/10.1002/esp.2205>.
21. Perron, J.T. (2011), Numerical methods for nonlinear hillslope transport laws. *J. Geophys. Res.*, 116, F02021, <http://dx.doi.org/10.1029/2010JF001801>.
20. Perron, J.T., J.W. Kirchner and W.E. Dietrich (2009), Formation of evenly spaced ridges and valleys. *Nature*, 460, 502–505, <http://dx.doi.org/10.1038/nature08174>.
19. Booth, A., J. Roering and J.T. Perron (2009), Automated landslide mapping using spectral analysis and high-resolution topographic data: Puget Sound lowlands, Washington, and Portland Hills, Oregon. *Geomorphology*, 109, 132–147, <http://dx.doi.org/10.1016/j.geomorph.2009.02.027>.
18. Perron, J.T. and P. Huybers (2009), Is there an orbital signal in the polar layered deposits on Mars? *Geology*, 37, 155–158, <http://dx.doi.org/10.1130/G25143A.1>.
17. Kite, E.S., I. Matsuyama, M. Manga, J.T. Perron and J.X. Mitrovica (2009), True polar wander driven by late-stage volcanism and the distribution of paleopolar deposits on Mars. *EPSL*, 280, 254–267, <http://dx.doi.org/10.1016/j.epsl.2009.01.040>.
16. Perron, J.T., W.E. Dietrich and J.W. Kirchner (2008), Controls on the spacing of first-order valleys. *J. Geophys. Res.*, 113, F04016, <http://dx.doi.org/10.1029/2007JF000977>.

15. Perron, J.T., J.W. Kirchner and W.E. Dietrich (2008), Spectral signatures of characteristic spatial scales and nonfractal structure in landscapes. *J. Geophys. Res.*, 113, F04003, <http://dx.doi.org/10.1029/2007JF000866>.
14. Daradich, A., J.X. Mitrovica, I. Matsuyama, J.T. Perron, M. Manga and M.A. Richards (2008), Equilibrium rotational stability and figure of Mars. *Icarus*, 194, 463–475, <http://dx.doi.org/10.1016/j.icarus.2007.10.017>.
13. Dietrich, W.E., J. McKean, D. Bellugi and J.T. Perron (2008), The prediction of shallow landslide location and size using a multidimensional landslide analysis in a digital terrain model. *Proceedings of the Fourth International Conference on Debris-Flow Hazards Mitigation*, C.-L. Chen & J. J. Major (eds), ISBN: 978-90-5966-059-5. <http://mit.edu/perron/www/files/Dietrich08.pdf>
12. Perron, J.T., J.X. Mitrovica, M. Manga, I. Matsuyama and M.A. Richards (2007), Evidence of an ancient martian ocean in the topography of deformed shorelines. *Nature*, 447, 840–843, <http://dx.doi.org/10.1038/nature05873>.
11. Roering, J.J., J.T. Perron and J.W. Kirchner (2007), Functional relationships between denudation and hillslope form and relief. *EPSL*, 264, 245–258, <http://dx.doi.org/10.1016/j.epsl.2007.09.035>.
10. Lamb, M.P., A.D. Howard, W.E. Dietrich and J.T. Perron (2007), Formation of amphitheatre-headed valleys by waterfall erosion after large-scale slumping on Hawai'i. *GSA Bulletin*, 119, 805–822, <http://dx.doi.org/10.1130/B25986.1>.
9. Perron, J.T., M.P. Lamb, C.D. Koven, I.Y. Fung, E. Yager and M. Adamkovics (2006), Valley formation and methane precipitation rates on Titan. *J. Geophys. Res.*, 111, E11001, <http://dx.doi.org/10.1029/2005JE002602>.
8. Dietrich, W.E. and J.T. Perron (2006), The search for a topographic signature of life. *Nature*, 439, 411–418, <http://dx.doi.org/10.1038/nature04452>.
7. Matsuyama, I., J.X. Mitrovica, M. Manga, J.T. Perron and M.A. Richards (2006), Rotational stability of dynamic planets with elastic lithospheres. *J. Geophys. Res.*, 111, E02003, <http://dx.doi.org/10.1029/2005JE002447>.
6. Lamb, M.P., A.D. Howard, J. Johnson, K.X. Whipple, W.E. Dietrich and J.T. Perron (2006), Can springs cut canyons into rock? *J. Geophys. Res.*, 111, E07002, <http://dx.doi.org/10.1029/2005JE002663>.
5. Perron, J.T., and I. de Pater (2004), Dynamics of an ice continent on Titan. *Geophys. Res. Lett.*, 31, L17S04, <http://dx.doi.org/10.1029/2004GL019802>.
4. Perron, J.T., W.E. Dietrich, A.D. Howard, J.A. McKean and J.A. Pettinga (2003), Ice-driven creep on Martian debris slopes. *Geophys. Res. Lett.*, 30(14), 1747, <http://dx.doi.org/10.1029/2003GL017603>.
3. Fuis, G.S., and 23 others (2001), Report for borehole explosion data acquired in the 1999 Los Angeles Region Seismic Experiment (LARSE II), Southern California. USGS Open File Report 01-408, <http://geopubs.wr.usgs.gov/open-file/of01-408/>.

2. Yamada, S., N. Goring-Morris, A. Gopher, and J.T. Perron (2001), Analysis of Faintly Glossed Blades from Pre-Pottery Neolithic Nahal Issaron, Israel. In: Caneva, I. Lemorini, C. Zampetti, D. and Biagi, P. (eds.) *Beyond tools: Redefining the PPN lithic assemblages of the Levant, Proceedings of the Third Workshop on PPN Chipped Lithic Industries* (Ca' Foscari University of Venice, Nov. 1998), Berlin, ex oriente, 183-204.
1. Perron, J.T. and C.A.S. Mandryk (1999), Preliminary report on the micromorphology of the Cactus Hill Site (44SX202), Sussex County, Virginia. *Current Research in the Pleistocene*, 16, 62–64.

Theses and other publications

4. Perron, J.T. (2012), Book Review: Planetary Surface Processes, by H.J. Melosh. *Physics Today*, 65(11), 56, <http://dx.doi.org/10.1063/PT.3.1789>.
3. Perron, J.T. (2006), Formation of evenly spaced ridges and valleys. PhD thesis, University of California, Berkeley.
2. Bemis, B.L., H.V. Goss, E.S. Yurkovich, J.T. Perron and D.G. Howell (2002). HAZPAC: An interactive map of Pacific Rim natural hazards, population, and infrastructure. U.S. Geological Survey Digital Data Series DDS-76, <http://pubs.usgs.gov/dds/dds-76>.
1. Perron, J.T. (1999), Micromorphology of the Cactus Hill Site (44SX202), Sussex County, Virginia. Honors Thesis, Harvard University.

CONFERENCE PRESENTATIONS

Approximately 50 abstracts in the past 5 years.

INVITED LECTURES

- 2016 Princeton University
Boston College
University of Washington, Departments of Earth & Space Sciences & Math (2)
US Army TARDEC workshop
- 2015 Swiss Federal Institute of Technology (ETH), Zürich (2)
Geological Society of America, Pardee Symposium on Appalachian Landscapes
National Center for Airborne Laser Mapping, University of Houston
University of Texas at Austin, Jackson School of Geosciences (2)
- 2014 McGill University, Department of Earth and Planetary Sciences
Cornell University, Department of Earth and Atmospheric Sciences/INSTOC
AGU fall meeting, Earth & Planetary Surface Processes focus group (2)
- 2013 Geological Society of America, Quaternary Geology & Geomorphology division

- Geological Society of America, Planetary division
 Swiss Federal Institute of Technology (ETH), Zürich
 University of Geneva, Department of Earth Sciences
 Institut de Physique du Globe de Paris (IPGP)
 European Geosciences Union annual meeting, Hydrological Sciences section
 Harvard University, Department of Earth and Planetary Sciences
 Lamont Doherty Earth Observatory, Columbia University
 Lehigh Univ., Dept. of Earth and Environmental Sciences, Foster Hewitt Lecture
- 2012 University of Chicago, James Franck Institute, Computations in Science Seminar
 Pennsylvania State University, Department of Geosciences
 Johns Hopkins University, Dept of Geography and Environmental Engineering
 University of Rhode Island Graduate School of Oceanography
 Middlebury College, Department of Geology
 Shell Inc. Exploration and Production (video seminar)
 MIT Dept. of Civil & Environmental Engineering, Env. Fluid Mechanics Seminar
 AGU fall meeting, Earth & Planetary Surface Processes focus group
- 2011 American Geophysical Union fall meeting, Robert P. Sharp Lecture
 Woods Hole Oceanographic Institution, Geodynamics Seminar
 University of British Columbia, Department of Earth and Ocean Sciences
 Univ. Oslo, Center for Physics of Geological Processes, Kongsberg Seminar
 University of Colorado, Boulder, Department of Geological Sciences
 Institut de Physique du Globe de Paris (IPGP)
- 2010 American Geophysical Union fall meeting, Hydrology section
 American Geophysical Union fall meeting, Nonlinear Geophysics focus group
 British Society for Geomorphology (50th anniversary keynote)
 Yale University, Department of Geology and Geophysics
 MIT Earth Systems Initiative
 University of Texas at Dallas, Department of Geosciences
- 2009 American Geophysical Union fall meeting, Hydrology section
 American Geophysical Union spring meeting, Hydrology section
 California Institute of Technology, Keck Institute for Space Studies
 Canadian Institute for Advanced Research, Earth Systems Evolution Program
 Boston College, Department of Geology and Geophysics
 Univ. of Minnesota, Dept of Civil Engineering / St. Anthony Falls Laboratory
 University of South Carolina, Department of Earth and Ocean Sciences
 University of Delaware, Department of Geological Sciences
 NSF National Center for Airborne Laser Mapping
- 2008 Princeton University, Department of Geosciences, Solid Earth Seminar
 Woods Hole Oceanographic Institution, Marine Geology and Geophysics Dept
 Woods Hole Oceanographic Institution, Applied Ocean and Physics Engineering
 University of Oregon, Department of Geological Sciences

- Stony Brook University, Department of Geosciences
 Japan-US Kavli Frontiers of Science Symposium, US Nat'l Academy of Sciences
 Harvard Alumni Association
 University of California, Berkeley, Center for Integrative Planetary Science
 University of Massachusetts, Amherst, Department of Geosciences
- 2006 Harvard University, Department of Earth and Planetary Science
 Harvard University, Departments of Earth and Planetary Science and Astronomy
 Stanford University, Department of Environmental Earth System Science
 MIT, Department of Earth, Atmospheric and Planetary Sciences
 California Institute of Technology, Dept of Geological and Planetary Sciences
 U.S. Geological Survey, Menlo Park
 Brown University, Department of Geological Sciences (2 talks)
 UCLA, Department of Earth and Space Sciences
 University of Illinois at Urbana-Champaign, Department of Geology
 Boston University, Department of Earth Sciences (2 talks)
 Rice University, Department of Earth Science (2 talks)
 UC Berkeley, Department of Earth and Planetary Science
 Lawrence Livermore National Lab/Institute for Geophysics and Planetary Physics
- 2005 Harvard University, Department of Earth and Planetary Science
 University of California, Berkeley, Center for Integrative Planetary Science
- 2004 University of California, Berkeley, Space Sciences Laboratory
 Orkustofnun Islands (National Energy Authority, Iceland)
 California State University, Sacramento, Department of Geology
- 2003 AGU Geodesy Section

MIT SERVICE

- Lectures Martin Family Society of Fellows, October 22, 2015
 Tech Day, June 7, 2014
 MIT Club of Colorado, October 28, 2013
 School of Science Breakfast Lecture, October 15, 2012
 Emma Rogers Society Luncheon Lecture, May 9, 2012
- Committees MIT Faculty Committee on Student Life, 2015–present
 MIT Faculty Subcommittee on the Communication Requirement, 2015
 MIT-WHOI Joint Committee on Geology & Geophysics, 2013–present
 Chair, EAPS Geology, Geochemistry & Geobiology, 2015–present
 Interim Chair, EAPS Geology, Geochemistry & Geobiology, 2014–2015
 Chair, EAPS Crosby Committee, 2013–present
 EAPS Undergraduate Education Committee, 2012–2014

EAPS Graduate Education Committee, 2009–2012

Academics Freshman Advisor, 2014–present

Experimental Study Group Advisor, 2014–present

EAPS Undergraduate Advisor, 2009–present

PhD thesis committees (* = MIT-WHOI Joint Program): Alexander Petroff, Ben Black, *Maya Bhatia, Terrence Blackburn, Martina Coccia, Alexander Evans, *Britta Voss, *Melissa Moulton, Nasruddin Nazerali, *Michael Toomey, Erin Shea, *Jaap Nienhuis, Elena Steponaitis, Michael Sori, Mirna Slim, Gabi Melo, Sudhish Bakku, Robert Viesca (Harvard)

MS thesis committees: Grant Farmer, Mirna Slim, Mathieu Talpe, Yodit Tewelde

General exam committees (* = MIT-WHOI Joint Program): Alexander Petroff, Ben Black, *Christine Chen, Alexander Evans, Grant Farmer, *Melissa Moulton, *Michael Toomey, Alan Richardson, Frank Centinello, *Alison Criscitiello, Xinding Fang, Hendrik Lenferink, Nasruddin Nazerali, Paul Richardson, Aaron Scheinberg, Michael Sori, Yodit Tewelde, Sonia Tikoo, Robert Yi, Ruel Jerry, Kim Huppert, *Jaap Nienhuis

Undergraduate thesis advisees: Jennifer Hamon (2010), Michelle Slosberg (2011), Naomi Schurr (2014), Madison Douglas (2015-16)

 EXTERNAL SERVICE

Reviews *Journal reviews*: Nature, Science, PNAS, Advances in Water Resources, American Journal of Science, Earth & Planetary Science Letters, Earth Surface Processes & Landforms, Geology, Geomorphology, Geophysical Research Letters, Geosphere, Icarus, Journal of Geology, Journal of Geophysical Research (Earth Surface, Planets, and Biogeosciences), Space Science Reviews, and Water Resources Research

Proposal reviews and review panels: NSF (Earth Sciences, Ocean Sciences, Office of Polar Programs/Antarctic Earth Sciences, Instrumentation & Facilities), NASA (Mars Data Analysis, Planetary Geology & Geophysics, Mars Fundamental Research, Outer Planets Research, Lunar Science), US Army Research Office, European Science Foundation, Swiss National Science Foundation

Editorial Advisory Board, *Earth Surface Processes & Landforms*, 2014–

Committees Steering committee, NSF-supported National Center for Airborne Laser Mapping (NCALM), 2009–2012; Chair, 2011–2012

Terrestrial Working Group, NSF-supported Community Surface Dynamics Modeling System (CSDMS), 2007–2010

Meetings Co-convener of session *Comparing and contrasting geomorphic channel networks*, 2016 American Geophysical Union Meeting

- Co-convener of session *From grains to landscapes: Understanding the links between surface topography, fluid mechanics and sediment transport*, 2013 American Geophysical Union Meeting
- Co-convener of session *Natural and controlled experiments in landscape evolution*, 2012 American Geophysical Union Meeting
- Co-convener of session *Fluvial channel dynamics: Width controls and hillslope coupling*, 2007 American Geophysical Union Meeting
- Co-organizer of Boston-area William Morris Davis Lecture Series, 2007–present
- Co-organizer of Gilbert Club Meeting, Berkeley, CA, 2000–2005
- Education Development of public-domain geology animations in collaboration with MIT Office of Educational Innovation and Technology (OEIT):
<http://mit-artemis.org/portfolio/3d-interactive-media/>
 News story: <http://mitne.ws/1gdasiA>
- Development of public-domain course content via MIT OpenCourseWare
- Co-organizer of Boston Evening Geomorphology Seminar (with BU, BC, Harvard, WHOI, NOAA), 2011–present
- Training session on spectral analysis and filtering at NSF-sponsored LiDAR workshop, Boulder, CO, June 2010
- Outreach Development of open-source software for terrain analysis and landscape evolution modeling: <http://mit.edu/perron/www/downloads.html>
- Various public lectures
- Selected media coverage: <http://mit.edu/perron/www/press.html>

TEACHING

12.001: Introduction to Geology · Average evaluation: 6.6/7 (n=41)

12.163/12.463: Geomorphology · Average evaluation: 6.7/7 (n=22)

12.467: Seminar in Geomorphology

12.021: Earth Science, Energy, and the Environment

STUDENTS SUPERVISED

Undergraduate Students

Jennifer Hamon 2009–2010

Jocelyn Fuentes 2010

Mathieu Lapôtre 2010

Abigail Koss 2009–2012

Kimberly Huppert 2010–2011

Michelle Slosberg 2011

T. Ben Thompson 2011–2013

Elise Myers 2011–2014

Kathryn Materna 2012–2014

Melody Liu	2012
Madison Douglas	2013–2016
Elizabeth Bailey	2013–2014
Ian Chesser	2013
Naomi Schurr	2013–2014
Judy Pu	2015–2016

Graduate Students (* = secondary advisor)

Paul Richardson	PhD 2015
Kimberly Huppert	2011–
Maya Stokes	2015–
Sam Goldberg	2016–
Marjorie Cantine *	2015–
James Bramante *	2016–
Ben Black *	PhD 2013
Hendrik Lenferink *	MS 2012
Mirna Slim *	MS 2012
Michael Toomey *	PhD 2013
Michael Sori *	PhD 2014
Yodit Tewelde *	MS 2013
Terry Blackburn *	PhD 2012
Alan Richardson *	PhD 2015
Jaap Nienhuis *	PhD 2015

Postdoctoral Researchers

Ken Ferrier	2010–2012
Justin Kao	2011–2012
Scott McCoy	2012–2013
Dino Bellugi	2012–2015
Giulio Mariotti	2012–2014
Seulgi Moon	2013–2015

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<http://mit.edu/perron/www>