

Simon Marius Mudd

Professor of Earth Surface Processes

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Appointments

- 2016– **Professor** of Earth Surface Processes: School of GeoSciences, University of Edinburgh, UK
2014–2016 **Reader** in Landscape Dynamics: School of GeoSciences, University of Edinburgh, UK
2013–2014 **Senior Lecturer** in Landscape Dynamics: School of GeoSciences, University of Edinburgh, UK
2007–2013 **Lecturer** in Landscape Dynamics: School of GeoSciences, University of Edinburgh, UK
2006–2007 **Research Associate**: Department of Earth and Environmental Sciences, Vanderbilt University, USA
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Education

- 2006 **PhD** in *Environmental Engineering*, Vanderbilt University, Nashville TN, USA
2001 **MA** in *Geological Sciences*, University of California, Santa Barbara, CA, USA
1999 **BA** in *Geology* (minor in German) University of California, Berkeley, CA, USA
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Awards

- 2014 **Gordon Warwick Medal** from the British Society for Geomorphology (for excellence in geomorphic research by someone within 15 years of PhD)
2013 **Arne Richter Award** for Outstanding Young Scientists of the European Geosciences Union
2011 **Penck Lecture**, EGU general assembly
2012– Nominated for Edinburgh University Student Association best course award (Earth Surface Systems and Eroding Landscapes in 2012 and 2013), Teaching Award (2012), Best feedback (2017)
2005 **Dissertation Enhancement Grant** awarded by Vanderbilt University Graduate School
2001 **George Tunnel Memorial Fellowship** awarded by UCSB department of Geological Sciences
1999–2000 University of California **Graduate Opportunity Fellowship**
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Leadership

- 2018–2019 **Chair**, British Society for Geomorphology (In addition, was deputy and junior deputy chair in previous two years)
2016– **Director**, Edinburgh E3/E4 NERC Doctoral Training Partnership
2016– **Convener**, Land Surface Dynamics Research Group at the University of Edinburgh School of GeoSciences
2014–2016 **Deputy Director**, Edinburgh E3 NERC Doctoral Training Partnership
2014 **Chair**, Digital Communications and Web Strategy Working Group, School of GeoSciences,
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2011–2013 University of Edinburgh
Coordinator of PhD recruitment, Global Change Research Institute, School of GeoSciences,
 University of Edinburgh

External Funding

As PI

- 2019–2029 E4 - Edinburgh Earth Ecology and Environment DTP ([NE/S007407/1](#); [pending](#))
 Funding Agency: *NERC*
 Award: **£7,874,280** based on 18 studentships for 5 years at £87k per student, FEC to Edinburgh
 P.I. Simon M. Mudd
- 2017–2023 Edinburgh NPIF studentships (NE/R009228/1)
 Funding Agency: *NERC*
 Award: **£496,522** FEC to Edinburgh
 P.I. Simon M. Mudd (note these are only available to NERC DTP holders so only partially competitive)
- 2016–2017 Software for quantifying shallow landslide hazards to transportation infrastructure under changing climate and forest management (NE/N01300X/1)
 Funding Agency: *NERC*
 Award: **£126,795** FEC to Edinburgh
 P.I. Simon M. Mudd
- 2014–2015 Leverhulme Trust International Academic Fellowship (IAF-2014-009)
 Funding Agency: *Leverhulme Trust*
 Award: **£24,064** FEC to Edinburgh
 P.I.: Simon M. Mudd
- 2013–2015 Constraining the topographic signature of erosion rates and processes using high resolution topography (W911NF-13-1-0478)
 Funding Agency: *US Army Research Office*
 Award: **£214,572** to Edinburgh
 P.I.: Simon M. Mudd
- 2012–2015 Using high resolution topographic data to detect regions of high seismic hazard from space
 Funding Agency: *Carnegie Trust grants for aid in research*
 Award: **£39,091**
 P.I. Simon M. Mudd
- 2012–2015 Predicting the distribution of major debris flow hazard using coupled 10Be erosion records and 1m resolution digital topography (NE/J012750/1)
 Funding Agency: *NERC*
 Award: **£64,959** FEC to Edinburgh
 P.I.: Simon M. Mudd
- 2012–2013 Tectonic and climatic control of hillslope lengths in granitic landscapes
 Funding Agency: *Carnegie Trust grants for aid in research*
 Award: **£2,200** FEC to Edinburgh
 P.I.: Simon M. Mudd
- 2009–2010 A coupled geomorphic and geochemical model for testing the dominant controls on chemical weathering rates in eroding landscapes (NE/H001174/1)
 Funding agency: *NERC*
 Award: **£70,478** FEC
 P.I.: Simon M. Mudd
- 2009–2010 Investigating the coupled response of rivers and hillslopes to tectonic perturbation
 Funding Agency: *Carnegie Trust grants for aid in research*
 Award: **£2,430**
 P.I.: Simon M. Mudd

As Co-PI

- 2019-2024 GCRF Urban Disaster Risk Hub (NE/S009000/1)
Funding Agency: *NERC*
Award: **£17,657,279**
P.I.: J. McCloskey, Co.I.: Simon M. Mudd
- 2018-2022 Future proofing strategies FOr RESilient transport networks against Extreme Events (FORE-SEE) Funding Agency: *EU H2020*
Award: **£76,779** to Edinburgh
Co.I.: Simon M. Mudd (Edinburgh lead. Project lead is Technalia)
- 2016-2020 Horizon 2020 Training Network: understanding subduction zone topography through modelling of coupled shallow and deep processes Funding Agency: *ERC*
Award: **€280,000** to Edinburgh
Co.I.: Simon M. Mudd (lead R.O. Potsdam University, local P.I.: Hugh Sinclair)
- 2019-2019 Space-based Services to support resilient and sustainable Critical Infrastructure - Feasibility study Funding Agency: *ESA*
Award: **£34,080** to Edinburgh
Co.I.: Simon M. Mudd (Edinburgh lead. Project lead is Telespazio Vega)
- 2016-2017 Dynamic Flood Topographies in the Terai, Nepal; community perception and resilience (NE/N007654/1)
Funding Agency: *NERC*
Award: **£156,448**
P.I.: Mikael Attal, Co.I.: Simon M. Mudd
- 2015-2016 Volcano-hydrologic hazards associated with the April 2015 eruption of Calbuco volcano, Chile (NE/N007654/1)
Funding Agency: *NERC*
Award: £51,636 FEC to Leeds; **£27,103** to Edinburgh
Co.I. Simon M. Mudd
- 2012-2015 Climate History Controls Future Landslide Hazard (NE/J009970/1)
Funding Agency: *NERC*
Award: **£109,154** FEC to Edinburgh
P.I.: Tristram Hales (Cardiff University) Co.I. Simon M. Mudd
- 2012-2013 Can long-term landscape change predict the impact of extreme events? A test from the flash-floods of the upper Indus Valley, Ladakh, 6th August 2010 (NE/I017747/1)
Funding Agency: *NERC*
Award: **£49,072** FEC
P.I.: Hugh Sinclair, Co.I.: Simon M. Mudd
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Editorial Activities

- 2013- **Associate Editor**, Earth Surface Dynamics
- 2008-2013 **Associate Editor**, Journal of Geophysical Research-Earth Surface
- 2009-2011 **Editorial Board**, Geology
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Service

- 2017- **Board member of the PhD programme**, Department of Geosciences, University of Padova, Italy
- 2006- **Proposal Peer Reviewer**: The Natural Environment Research Council, U.K.; The National Science Foundation (NSF); Carnegie Foundation for Grants in Aid of Research; British Society for Geomorphology; American Chemical Society; Austrian National Research Agency, French
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National Research Agency (ANR); Swiss National Research Agency; German National Research Agency (DFG), Research Foundation Flanders (FWO); U.S. Army Research Office (ARO); US-Israel Binational Science Foundation

- 2004– **Journal Peer Reviewer:** Advances in Water Resources; American Journal of Science; AGU books; Basin Research; Earth and Planetary Science Letters; Earth's Future; Earth Surface Processes and Landforms; Ecology; Estuarine, Coastal and Shelf Science; Estuaries and Coasts; Earth Surface Dynamics; Geology; Geomorphology; Geophysical Research Letters; Global Biogeochemical Cycles; Geochimica et Cosmochimica Acta; Geoderma, Journal of Geophysical Research-Earth Surface; Journal of Geophysical Research-Biogeosciences; Journal of Hydrology; Limnology and Oceanography; Marine Biology; Nature; Nature Geoscience; PLoS; PNAS; Pedosphere; Science; Water Resources Research
- 2014–2017 **External examiner:** University of Manchester, Masters in Environmental Modelling, Monitoring and Reconstruction
- 2016 **Convener,** EGU general assembly: HS10.1/GM12.7/OS2.6 Estuarine processes
- 2015 **Convener,** EGU general assembly: HS10.1/GM8.3/OS2.5 Estuarine processes
- 2014 **Convener,** EGU general assembly: HS10.1/GM8.4 Estuarine processes
- 2013 **Convener,** EGU general assembly: HS10.3 Estuarine processes
- 2012 **Convener,** 29th IUGG Conference on Mathematical Geophysics: Earth Systems Dynamics session
- 2012 **Convener,** EGU general assembly: HS10.2/GM8.2 Estuarine processes
- 2011 **Convener,** fall AGU Session: Coastal Geomorphology and Morphodynamics
- 2010– **Member,** NERC peer review college
- 2009 **Convener,** fall AGU Session: 'Sediment Supply, Storage, and Delivery as Controlled by Hillslope Channel Coupling'
- 2009 **Co-Convener,** EGU general meeting session: 'Novel approaches to quantifying the timing and rate of landscape change'
- 2008 **Delegate:** Meeting of Young Researchers in Earth Sciences III held in New Orleans, LA
- 2007–2014 **Member, Global Change Research Group Committee:** School of GeoSciences, University of Edinburgh
- 2007– **Director of Studies then personal tutor:** For Geology and Physical Geography program, School of GeoSciences, University of Edinburgh
- 2007 **Convener,** fall AGU Session: 'Controls on Geochemical and Biogeochemical Processes in the Critical Zone'
- 2005–2007 **Seminar Series Committee Member:** Vanderbilt University Department of Earth and Environmental Sciences
- 2004–2006 **Graduate Student Representative:** Vanderbilt University Department of Earth and Environmental Sciences
- 2003 **Graduate Student Representative:** Florida State University department of Geological Sciences

Invited Talks

- 2018 **Symposium on Coastal Resources and Environment (CORE), Hohai University, China,** Invited talk
GFZ–Potsdam, Germany, Section 4.7 - Earth Surface Process Modelling, Section Seminar
GFZ–Potsdam, Germany, Section 5.1 - Geomorphology, Section Seminar
- 2017 **CNRS Toulouse, France,** Department Seminar
Department of Geography, Durham University, Department Seminar
- 2016 **Erosion and sedimentation processes in the high mountains session, EGU general assembly,** Solicited talk
Frontiers in Geomorphometry Session, EGU general assembly, Solicited PICO
Department of Geosciences, University of Padova, Department Seminar

- 2015 **Department of Geosciences, University of Padova**, Department Seminar
Department of Land, Environment, Agriculture and Forestry, University of Padova, Department Seminar
- 2014 **Soil carbon session, EGU general assembly**, Invited talk
Institute of Earth Sciences, University of Lausanne, Department Seminar
Department of Geosciences, University of Padova, Department Seminar
Geochemistry of the Earth Surface-GES10, Paris, Keynote Talk
Gordon Warwick Medal Talk, British Society for Geomorphology, Keynote Talk
- 2013 **Keynote Lecture for Arne Richter Award**, EGU general assembly
Department of Earth Science and Engineering, Imperial College London, Department Seminar
- 2012 **School of Geographical Sciences, University of Bristol**, Department seminar
Soil carbon session, EGU general assembly, Invited talk
Modelling and geochemistry session, Goldschmidt conference, Montreal Canada, Invited talk
Institute of Geology and Mineralogy, University of Cologne, Department Seminar
School of Geographical and Earth Sciences, University of Glasgow, Department Seminar
- 2011 **Penck Keynote Lecture** (given to outstanding young geomorphologist), EGU general assembly
Department of Geography and Environmental Engineering, Johns Hopkins University, Department seminar
European Surface Processes Meeting, Loch Lomond, Scotland, Invited talk
LUCIFS soil carbon workshop, Bern Switzerland, Invited talk
DEFRA soil erosion workshop, Exeter UK, Invited talk
- 2010 **Department of Geography and Geosciences, University of St. Andrews**, Department seminar
University of Rennes, Department of Geosciences, Department seminar
- 2009 **INSTAAR/Geography, University of Colorado**, Department seminar
Department of Geography, Durham University, Department seminar
Department of Earth Sciences, Oxford University, Department seminar
- 2008 **School of Earth and Ocean Sciences, Cardiff University**, Department seminar
SAGES annual meeting, Aberfoyle, Scotland, Invited talk
- 2007 **University of Exeter, Department of Geography**, Department seminar
- 2006 **Department of Environmental Science, Policy, and Management, University of California, Berkeley**, Department seminar
Department of Earth Sciences, Boston University, Department seminar
Department of Geology and Geophysics, University of Wisconsin at Madison, Department seminar

PhD Students Supervised as primary supervisor

- 2016– **Guillaume Goodwin**, NERC Doctoral Training Partnership studentship
- 2015– **Louis Kinnear**, NERC Doctoral Training Partnership studentship
- 2015– **Noorzalinee Ghazali**, Malaysian Government Studentship
- 2013–2017 **Fiona Clubb**, Carnegie Caledonian Studentship (Now lecturer at Durham University)
- 2013–2016 **Stuart Grieve**, NERC Tied PhD studentship (Now lecturer at Queen Mary University London)
- 2011–2016 **David Milodowski**, NERC PhD studentship (Now postdoc with Mat Williams at the University of Edinburgh)
- 2018–2012 **Martin Hurst**, NERC PhD studentship (Now lecturer at University of Glasgow)
- 2010–2011 **Lynsey Callaghan**, NERC PhD studentship (Now working in environmental consultancy)
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Post Doctoral and Research Supervision

- 2019 **Boris Gailleton** (completing PhD)
 2016–2017 **Stuart Grieve** now lecturer at QMUL
 2014–2016 **Marie-Alice Harel** now full-time illustrator
 2012–2013 **Daniel Hobley** (Lead supervisor: Hugh Sinclair) now lecturer at Cardiff University

Courses Taught

- 2015–2016 Numeracy, Modelling and Data Management (PhD students)
 2014–2016 Frontiers in Geosciences (seminar series for PhD students)
 2013–2016 Environmental Modelling and Prediction (1st year undergraduate; course organizer)
 2010–2012 Geomorphology at the University of Edinburgh (2nd year undergraduate)
 2009– Eroding Landscapes at the University of Edinburgh (3rd/4th year undergraduate). Nominated for an Edinburgh University Students Association Teaching award 'best course' in 2012
 2008–2013 Tectonic Geomorphology at the University of Edinburgh (4th year undergraduate)
 2008– Spain Field course at the University of Edinburgh (3rd year undergraduate; Course Organizer from 2010)
 2008–2014 Earth Surface Systems at the University of Edinburgh (1st year undergraduate; Course Organizer from 2009). Nominated for an Edinburgh University Students Association Teaching award 'best course' in 2014
 2007–2011 Northwest Scotland Field course at the University of Edinburgh (3rd year undergraduate)
 2007– Field teaching on day trips for sedimentology (2nd year undergraduate, 1 day) and Earth Materials (1st year undergraduate, 1 day)
 2006 Geomorphology at Vanderbilt University (with David Furbish; undergraduate and postgraduate)

Software

My group has released several software packages to the community, including:

TOOLS

- Github The LSDTopoTools software package for topographic analysis has a number of repositories located on the [Github LSDTopoTools page](#)
 A variety of scripts for both computation and visualization can be found on my github page: username [simon-marius-mudd](#)
- Zenodo My collaborators and I have released a number of packages via Zenodo within the [LSDTopoTools software package](#)
 Mudd, S. M., Clubb, F. J., Gailleton, B., Grieve, S. W. D., Valters, D. A., and Hurst, M. D. (2019, February 8). LSDTopoTools Documentation (Version v2.0). *Zenodo*.
<http://doi.org/10.5281/zenodo.2560224>
 Mudd, S. M., Clubb, F. J., Gailleton, B., Valters, D. A., Hurst, M. D., and Grieve, S. W. D. (2019, February 8). LSDMappingTools (Version v0.1). *Zenodo*.
<http://doi.org/10.5281/zenodo.2560166>
 Goodwin, G. C. H., Mudd, S. M., and Clubb, F. J. (2017, October 10). LSDtopotools Marsh Platform Identification Tool (Version v0.2). *Zenodo*.
<http://doi.org/10.5281/zenodo.1007788>
 Mudd, S. M., Jenkinson, J., Valters, D. A., and Clubb, F. J. (2017, September 26). MuddPILE the Parsimonious Integrated Landscape Evolution Model (Version v0.08). *Zenodo*.
<http://doi.org/10.5281/zenodo.997407>

Mudd, S. M., Clubb, F. J., Gailleton, B., Hurst, M. D., Milodowski, D. T., and Valters, D. A. (2018, June 18). The LSDTopoTools Chi Mapping Package (Version 1.11). *Zenodo*.

<http://doi.org/10.5281/zenodo.1291889>

Clubb, F. J., Mudd, Simon M., Milodowski, D. T., and Grieve, S. W. D. (2017, July 8). LSDDrainageDensity v1.0 (Version v1.0). *Zenodo*.

<http://doi.org/10.5281/zenodo.824423>

Clubb, F. J., Mudd, Simon M., Milodowski, D. T., Grieve, S. W. D., and Hurst, M. D. (2017, July 7). LSDChannelExtraction v 1.0 (Version v1.0). *Zenodo*.

<http://doi.org/10.5281/zenodo.824198>

Clubb, F. J., Mudd, S. M., Grieve, S. W. D., Milodowski, D. T., Valters, D. A., and Hurst, M. D. (2017, July 6). LSDTerraceModel v1.0. *Zenodo*.

<http://doi.org/10.5281/zenodo.824205>

CSDMS A tool for examining changes in normalised channel steepness. Simon M. Mudd was the lead developer. [Link to chi analysis tool on CSDMS](#)

A tool for quantifying surface roughness from LiDAR data, with the application of detecting rock outcrops. PhD student David T. Milodowski was the lead developer. [Link to surface roughness tool on CSDMS](#)

A tool for detecting channel heads from LiDAR data. PhD student Fiona J. Clubb was the lead developer. [Link to driech algorithm on CSDMS](#)

DOCUMENTATION

Online documentation of our tools and methods can be found at:

https://lsdtopotools.github.io/LSDTT_documentation/

<https://lsdtopotools.github.io/>

Publications

Click on the doi to link to the paper. A number of these are behind paywalls, so alternatively see <http://www.geos.ed.ac.uk/homes/smudd/publications.html> for links to pdfs. Citation metrics can be found at [Google Scholar](#); username [Simon M. Mudd](#).

JOURNAL ARTICLES

2019 **61.** Gailleton, B., Mudd, S. M., Clubb, F. J., Peifer, D., and Hurst, M. D. (2019). A segmentation approach for the reproducible extraction and quantification of knickpoints from river long profiles. *Earth Surface Dynamics*, 7(1), 211-230.

<https://doi.org/10.5194/esurf-7-211-2019>

2019 **60.** Strong, C. M., Attal, M., Mudd, S. M., and Sinclair, H. D. (2019). Lithological control on the geomorphic evolution of the Shillong Plateau in Northeast India. *Geomorphology*, 330, 133-150. <https://doi.org/10.1016/j.geomorph.2019.01.016>

2019 **59.** Sinclair, H. D., Stuart, F. M., Mudd, S. M., McCann, L., and Tao, Z. (2019). Detrital cosmogenic Ne-21 records decoupling of source-to-sink signals by sediment storage and recycling in Miocene to present rivers of the Great Plains, Nebraska, USA. *Geology*, 47(1), 3-6. <https://doi.org/10.1130/G45391.1>

2018 **58.** Mudd, S.M., Clubb, F. J., Gailleton, B., and Hurst, M. D. (2018). How concave are river channels? *Earth Surface Dynamics*, 6(2), 505-523.

<https://doi.org/10.5194/esurf-6-505-2018>

2018 **57.** Babault, J., Viaplana-Muzas, M., Legrand, X., Van Den Driessche, J., González-Quijano, M., and Mudd, S. M. (2018). Source-to-sink constraints on tectonic and sedimentary evolution of the western Central Range and Cenderawasih Bay (Indonesia). *Journal of Asian Earth Sciences*, 156, 265-287. <https://doi.org/10.1016/j.jseaes.2018.02.004>

2018

- 2018 56. Eger, A., Yoo, K., Almond, P. C., Boitt, G., Larsen, I. J., Condrón, L. M., and Mudd, S. M. (2018). Does soil erosion rejuvenate the soil phosphorus inventory? *Geoderma*, 332, 45-59. <https://doi.org/10.1016/j.geoderma.2018.06.021>
- 2018 55. Wang, X., Yoo, K., Mudd, S. M., Weinman, B., Gutknecht, J., and Gabet, E. J. (2018). Storage and export of soil carbon and mineral surface area along an erosional gradient in the Sierra Nevada, California. *Geoderma*, 321, 151-163. <https://doi.org/10.1016/j.geoderma.2018.02.008>
- 2018 54. Codilean, A. T., Munack, H., Cohen, T. J., Saktura, W. M., Gray, A., and Mudd, S. M. (2018). OCTOPUS: An open cosmogenic isotope and luminescence database. *Earth System Science Data*, 10(4), 2123-2139. <https://doi.org/10.5194/essd-10-2123-2018>
- 2018 53. Preston, J., Hurst, M. D., Mudd, S. M., Goodwin, G. C. H., Newton, A. J., and Dugmore, A. J. (2018). Sediment accumulation in embayments controlled by bathymetric slope and wave energy: Implications for beach formation and persistence. *Earth Surface Processes and Landforms*, 43(11), 2421-2434. <https://doi.org/10.1002/esp.4405>
- 2018 52. Grieve, S. W. D., Hales, T. C., Parker, R. N., Mudd, S. M., and Clubb, F. J. (2018). Controls on Zero-Order Basin Morphology. *Journal of Geophysical Research: Earth Surface*, 123(12), 3269-3291. <https://doi.org/10.1029/2017JF004453>
- 2018 51. Goodwin, G. C. H., Mudd, S. M., and Clubb, F. J. (2018). Unsupervised detection of salt marsh platforms: A topographic method. *Earth Surface Dynamics*, 6(1), 239-255. <https://doi.org/10.5194/esurf-6-239-2018>
- 2017 50. Clubb, F. J., Mudd, S. M., Milodowski, D. T., Valters, D. A., Slater, L. J., Hurst, M. D., and Limaye, A. B. (2017). Geomorphometric delineation of floodplains and terraces from objectively defined topographic thresholds. *Earth Surface Dynamics*, 5(3), 369-385. <https://doi.org/10.5194/esurf-5-369-2017>
- 2017 49. Mudd, S.M. (2017). Detection of transience in eroding landscapes. *Earth Surface Processes and Landforms*, 42(1), 24-41. <https://doi.org/10.1002/esp.3923>
- 2017 48. Sinclair, H. D., Mudd, S. M., Dingle, E., Hopley, D., Robinson, R., and Walcott, R. (2017). Squeezing river catchments through tectonics: Shortening and erosion across the Indus Valley, NW Himalaya. *Bulletin of the Geological Society of America*, 129(1-2), 203-217. <https://doi.org/10.1130/B31435.1>
- 2016 47. Grieve, S. W. D., Mudd, S. M., Milodowski, D. T., Clubb, F. J., and Furbish, D. J. (2016). How does grid-resolution modulate the topographic expression of geomorphic processes? *Earth Surface Dynamics*, 4(3), 627-653. <https://doi.org/10.5194/esurf-4-627-2016>
- 2016 46. Grieve, S. W. D., Mudd, S. M., Hurst, M. D., and Milodowski, D. T. (2016). A nondimensional framework for exploring the relief structure of landscapes. *Earth Surface Dynamics*, 4(2), 309-325. <https://doi.org/10.5194/esurf-4-309-2016>
- 2016 45. Grieve, S. W. D., Mudd, S. M., and Hurst, M. D. (2016). How long is a hillslope? *Earth Surface Processes and Landforms*, 41(8), 1039-1054. <https://doi.org/10.1002/esp.3884>
- 2016 44. Harel, M.-A., Mudd, S. M., and Attal, M. (2016). Global analysis of the stream power law parameters based on worldwide ¹⁰Be denudation rates. *Geomorphology*, 268, 184-196. <https://doi.org/10.1016/j.geomorph.2016.05.035>
- 2016 43. Parker, R. N., Hales, T. C., Mudd, S. M., Grieve, S. W. D., and Constantine, J. A. (2016). Colluvium supply in humid regions limits the frequency of storm-triggered landslides. *Scientific Reports*, 6. <https://doi.org/10.1038/srep34438>
- 2016 42. Clubb, F. J., Mudd, S. M., Attal, M., Milodowski, D. T., and Grieve, S. W. D. (2016). The relationship between drainage density, erosion rate, and hilltop curvature: Implications for sediment transport processes. *Journal of Geophysical Research: Earth Surface*, 121(10), 1724-1745. <https://doi.org/10.1002/2015JF003747>
- 2015 41. Attal, M., Mudd, S. M., Hurst, M. D., Weinman, B., Yoo, K., and Naylor, M. (2015). Impact of change in erosion rate and landscape steepness on hillslope and fluvial sediments grain size in the Feather River basin (Sierra Nevada, California). *Earth Surface Dynamics*, 3(1), 201-222. <https://doi.org/10.5194/esurf-3-201-2015>
- 2015 40. Milodowski, D. T., Mudd, S. M., and Mitchard, E. T. A. (2015a). Erosion rates as a potential bottom-up control of forest structural characteristics in the Sierra Nevada Mountains. *Ecology*, 96(1), 31-38. <https://doi.org/10.1890/14-0649.1>
- 2015 38. Gabet, E. J., Mudd, S. M., Milodowski, D. T., Yoo, K., Hurst, M. D., and Dosseto, A. (2015). Local topography and erosion rate control regolith thickness along a ridgeline in the

- Sierra Nevada, California. *Earth Surface Processes and Landforms*, 40(13), 1779-1790. <https://doi.org/10.1002/esp.3754>
- 2015 37. Devrani, R., Singh, V., Mudd, S. M., and Sinclair, H. D. (2015). Prediction of flash flood hazard impact from Himalayan river profiles. *Geophysical Research Letters*, 42(14), 5888-5894. <https://doi.org/10.1002/2015GL063784>
- 2015 36. Milodowski, D. T., Mudd, S. M., and Mitchard, E. T. A. (2015b). Topographic roughness as a signature of the emergence of bedrock in eroding landscapes. *Earth Surface Dynamics*, 3(4), 483-499. <https://doi.org/10.5194/esurf-3-483-2015>
- 2014 35. Johnson, M. O., Mudd, S. M., Pillans, B., Spooner, N. A., Keith Fifield, L., Kirkby, M. J., and Gloor, M. (2014). Quantifying the rate and depth dependence of bioturbation based on optically-stimulated luminescence (OSL) dates and meteoric ¹⁰Be. *Earth Surface Processes and Landforms*, 39(9), 1188-1196. <https://doi.org/10.1002/esp.3520>
- 2014 34. Mudd, S.M., Attal, M., Milodowski, D. T., Grieve, S. W. D., and Valters, D. A. (2014). A statistical framework to quantify spatial variation in channel gradients using the integral method of channel profile analysis. *Journal of Geophysical Research: Earth Surface*, 119(2), 138-152. <https://doi.org/10.1002/2013JF002981>
- 2014 33. Clubb, F. J., Mudd, S. M., Milodowski, D. T., Hurst, M. D., and Slater, L. J. (2014). Objective extraction of channel heads from high-resolution topographic data. *Water Resources Research*, 50(5), 4283-4304. <https://doi.org/10.1002/2013WR015167>
 Comment Clubb, F., Mudd, S., and Milodowski, D. (2015). Reply to comment by P. Passalacqua and E. Foufoula-Georgiou on 'objective extraction of channel heads from high-resolution topographic data. *Water Resources Research*, 51(2), 1377-1379. <https://doi.org/10.1002/2014WR016603>
- 2014 32. Mudd, Simon M., Yoo, K., and Weinman, B. (2014). Quantifying Geomorphic Controls on Time in Weathering Systems. *Procedia Earth and Planetary Science*, 10, 249-253. <https://doi.org/10.1016/j.proeps.2014.08.033>
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EXTENDED ABSTRACTS, COMMENTARIES, AND OTHER CONTRIBUTIONS

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