

Joel S. Scheingross

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Professional Appointments

Assistant Professor, University of Nevada Reno, Dept. of Geological Sciences and Engineering, Jan. 2019 - Present
Postdoctoral Scientist, GFZ – German Research Centre for Geosciences, Potsdam, Germany, Nov. 2017 – Oct. 2018
Alexander von Humboldt Postdoctoral Fellow, GFZ – German Research Centre for Geosciences, Potsdam, Germany,
Nov. 2015 – Oct. 2017
Research / Teaching Assistant, California Institute of Technology, September 2009 – October 2015
Research staff, University of California, Berkeley, May 2008 – June 2009

Education

PhD, Geology, California Institute of Technology, Adviser: Michael Lamb, 2015
M.S., Geology, California Institute of Technology, 2012.
B.A., Geology, University of California, Berkeley, 2007.
B.S., Environmental Science, University of California, Berkeley, 2007.

Peer-reviewed publications (*indicates advised high school, undergraduate, or graduate student)

[ORCID](#) | [Google Scholar](#)

In Review and Revision

Repasch, M., Wittmann, H., **Scheingross, J.S.**, Hovius, N., Sachse, D., Szupiany, R., and O. Orfeo, in review, Sediment transit time and floodplain storage dynamics in alluvial rivers revealed by meteoric ¹⁰Be, submitted to *JGR Earth Surface*.

Scheingross, J.S., Repasch, M.N., Hovius, N., Sachse, D., Lupker, M., Fuchs, M., Halevy, I., Gröcke, D.R., *Golombek, N.Y., Hahipour, N, Eglinton, T.I., and O. Orfeo, in review, Constrains on organic carbon modification and oxidation during transient floodplain storage.

In Press and Print

13. **Scheingross, J.S.**, Hovius, N., Dellinger, M., Hilton, R.G., Repasch, M., Sachse, D., Gröcke, D.R., Vieth-Hillebrand, A., and J.M. Turowski, 2019, Preservation of organic carbon during active fluvial transport and particle abrasion, *Geology*, V. 47, no. 10, p. 958-962, doi:10.1130/G46442.1.
12. **Scheingross, J.S.**, M.P. Lamb, and B. Fuller, 2019, Self-formed bedrock waterfalls, *Nature*, V. 567, doi: 10.1038/s41586-019-0991-z .
11. **Scheingross, J.S.**, and M.P. Lamb, 2017, A mechanistic model of waterfall plunge-pool erosion into bedrock, *JGR – Earth Surface*, doi: 10.1002/2017JF004195.
10. **Scheingross, J.S.**, *Lo, D.Y., and M.P. Lamb, 2017, Self-formed waterfall plunge pools in homogeneous rock, *Geophysical Research Letters*, V. 44:1, p. 200-208, doi: 10.1002/2016GL071730.
9. **Scheingross, J.S.** and M.P. Lamb, 2016, Sediment transport through self-adjusting, bedrock-walled waterfall plunge pools, *JGR-Earth Surface*, V. 121, p. 939-963, doi: 10.1002/2015JF003620.
8. Lamb, M.P., Finnegan, N.J, **Scheingross, J.S.**, and Sklar, L.S., 2015, New insight into the mechanics of fluvial bedrock erosion through flume experiments and theory, *Geomorphology*, V. 244, p. 33-55, doi: 10.1016/j.geomorph.2015.03.003.
7. **Scheingross, J.S.**, Brun, F., *Lo, D.Y., *Omerdin, K., and M.P. Lamb, 2014, Experimental evidence for fluvial bedrock incision by suspended and bed-load sediment, *Geology*, V. 42, no. 6, p. 523-526, doi:10.1130/G35432.1.
6. Mackey, B.H., **Scheingross, J.S.**, Lamb, M.P., and K.A. Farley, 2014, Knickpoint formation, rapid propagation, and landscape response following coastal cliff retreat at last-interglacial sea-level highstand: Kaua'i, Hawai'i, *GSA Bulletin*, V.126, no.7/8, p. 925-942, doi:10.1130/B30930.1.
5. DiBiase, R.A., Limaye, A.B., **Scheingross, J.S.**, Fischer, W.W. and Lamb, M.P., 2013, Deltaic deposits at Aeolis Dorsa: Sedimentary evidence for a standing body of water on the northern plains of Mars, *JGR - Planets*, V. 118, Issue 6, pg. 1285-1308, doi: 10.1002/jgre.20100.

4. **Scheingross, J.S.**, Winchell, E.W., Lamb, M.P., and W.E. Dietrich, 2013, Influence of bed patchiness, slope, grain hiding, and form drag on gravel mobilization in very steep streams, *JGR – Earth Surface*, V. 118, Issue 2, p. 982-1001, doi: 10.1002/jgrf.20067.
3. **Scheingross, J.S.**, Minchew, B.M., Mackey, B.H., Simons, M., Lamb, M.P., and S. Hensley, 2013, Fault-zone controls on the spatial distribution of slow-moving landslides, *GSA Bulletin*, V. 125, no. 3/4, p. 473–489; doi: 10.1130/B30719.1.
2. Lamb, M.P., **Scheingross, J.S.**, Swanson, E., Amidon, W., Limaye, A., 2011, A model for post-fire sediment flux by dry ravel in steep landscapes. *JGR - Earth Surface*, V. 116, Issue F3, doi: 10.1029/2010JG001878.
1. Hurst, T.P., Cooper, D.W., **Scheingross, J.S.**, Seale, E.M., Laurel, B.J., and M.L. Spencer. 2009. Effects of ontogeny, temperature, and light on vertical movements of larval Pacific cod (*Gadus macrocephalus*). *Fisheries Oceanography*, 18, 5, p. 301-311 doi:10.1111/j.1365-2419.2009.00512.x.

Other publications

- Scheingross, J.S.**, 2015, Mechanics of sediment transport and bedrock erosion in steep landscapes, Ph.D. dissertation, California Institute of Technology, Pasadena, California.
- Scheingross, J.S.**, 2007. Predicting species distribution of Sierra Nevada butterflies in response to climate change. Senior Thesis, University of California, Berkeley.

Honors

- AGU Luna B. Leopold Young Scientist Award (2019)
- AGU Fall Meeting Robert P. Sharp Lecture invited speaker (2019)
- Outstanding Student Presentation Award, AGU Fall Meeting (2013)
- UC Berkeley, Earth and Planetary Science Department Citation (2007)

Awards

- Alexander von Humboldt Postdoctoral Fellow (2015 – 2017)
- National Science Foundation Graduate Research Fellowship Program recipient (2011-2014)
- National Center for Airborne Laser Mapping (NCALM) seed grant recipient (2010)
- Charles H. Ramsden Research Fellow, UC Berkeley (2007)
- NSF Research Experience for Undergraduates Fellow, Oregon State University (2006)

Graduate student supervision

- Erika Groh, PhD student, University of Nevada Reno, 2019 - present
- Sophie Rothman, PhD student, University of Nevada Reno (co-advised with Scott McCoy), 2019 - present
- Nina Golombek, Jan. 2018 – July 2019, Masters student, University of Potsdam, Germany. Seasonality of organic carbon export and stable isotopic signatures in an Andean lowland River.

Undergraduate and high school student supervision

- 2018: Ramona Schneider (University of Bonn), Silicate weathering laboratory flume experiments.
- 2017: Toni Schmidt (University of Potsdam), Oxidation of organic carbon in laboratory flume experiments.
- 2016-2017: Nina Golombek (University of Potsdam), Organic carbon oxidation during floodplain storage.
- 2014: Juliane Preimesberger (Caltech), Bedrock erosion in steep mountain streams.
- 2013: Gheorghe Schreiber (LA Center for Enriched Studies), Mixed grain size distribution influence on bedrock erosion.
- 2012-2013: Khadijah Omerdin (Westridge High School), Erosion of bedrock by suspended sediment.
- 2012: Daniel Lo (Caltech), Polyurethane foam as a bedrock simulant in laboratory erosion experiments.
- 2010 and 2011: Conor O’Toole (Bowdoin College), Erosion of waterfall plunge pools.

Synergistic and professional activities

- AGU Earth and Planetary Surface Processes (EPSP) executive committee member (2017 – present)
- AGU EPSP webmaster and social media co-coordinator (2015 – present)
- Organizer, AGU EPSP “Ways & Means” mug fundraiser (\$1380 raised, 2018)
- Organizer and co-founder of AGU EPSP “Young Geomorphologist Night” (2013-2014)
- Session convener, AGU Fall Meeting (2014 - 2018)
- Session convener, EGU General Assembly (2016 - 2017)
- Reviewer for *Earth Surface Dynamics*, *Earth Surface Processes and Landforms*, *Geology*, *Geophysical Research Letters*, *GSA Bulletin*, *JGR– Earth Surface*, US NSF, US-Israel Binational Science Foundation

Organizer for Caltech Geoclub seminar series (academic year 2011/2012, summer 2014)
Regular (6x/yr) guest lecturer, 6th Grade Earth Sciences, McKinley Middle School (2010- 2015)
Caltech *Science Saturday* public outreach lecture (2011)
Member: American Geophysical Union, European Geosciences Union, Geochemical Society

Courses taught

University of Nevada Reno:

- Geology 212: Sedimentology and stratigraphy
- Geological Engineering 430/640: Fluvial sediment transport and bedrock erosion
- Geology 740: Earth science communication theory and practice

Invited seminars

2019: AGU Robert P. Sharp Lecture, Sacramento State, University of Colorado Boulder
2018: University Nevada Reno, Ben-Gurion University of the Negev
2017: Université Rennes, Universität Tübingen, UC Berkeley, UC Santa Barbara, UC Riverside
2016: Dartmouth College, Imperial College London, Université Grenoble Alpes, University of Edinburgh
2015: Ben-Gurion University of the Negev, University of Potsdam
2014: GFZ German Research Center for Geosciences, University of Southern California
2013: NASA Jet Propulsion Laboratory

Select first-authored conference abstracts and proceedings

- Scheingross, J.S.**, Bufo, A., Hemingway, J., Hovius, N., Goldberg, T., Schleicher, A.M., Influence of fluvial sediment abrasion on carbonate, silicate, and sulfide weathering (invited), *AGU Fall Meeting 2019*, EP42A-01.
- Scheingross, J.S.** Assessing the role of autogenic dynamics and organic carbon transport in the co-evolution of climate, tectonics, and topography (invited), Robert P. Sharp Lecture, *AGU Fall Meeting 2019*, EP44A-01.
- Scheingross, J.S.**, Dellinger, M., Eglinton, T., Fuchs, M., Golombek, N. Hilton, R.G., Hovius, N., Lupker, M., Repasch, M., Sachse, D. Turowski, J.M., Veith-Hillebrand, A., and H. Wittmann, 2017, Insights into organic carbon oxidation potential during fluvial transport from laboratory and field experiments, *Goldschmidt 2017 Abstract*.
- Scheingross, J.S.**, Lamb, M.P., and B.M. Fuller, 2015, Autocyclic formation, retreat, and destruction of waterfalls in an experimental bedrock channel, *AGU Fall Meeting 2015*, EP13C-01.
- Scheingross, J.S.**, and M.P. Lamb., 2014, Controls on filling and evacuation of sediment in waterfall plunge pools, *AGU Fall Meeting 2014*, EP31D-3586.
- Scheingross, J.S.**, Brun, F., *Lo, D.Y., *Omerdin, K., and M.P. Lamb., 2013, Experimental evidence for bedrock erosion by suspended sediment, *AGU Fall Meeting 2013*, EP33C-0913.
- Scheingross, J.S.**, Minchew, B.M., Mackey, B.H., Simons, M., Lamb, M.P., Hensley, S., 2012, The influence of large-magnitude earthquakes and fault zone damage on the spatial distribution of slow-moving landslides, *AGU Fall Meeting 2012*, EP44A-01.
- Scheingross, J.S.**, Winchell, E.W., Lamb, M.P., and W.E. Dietrich, 2010. Micro-topography controls on incipient motion in very steep, ephemeral streams, *AGU Fall Meeting 2010*, EP31A-072
- Scheingross, J.S.**, Willenbring, J.K., and W.E. Dietrich, 2008. Erosion Rates and Debris Flow History Reconstruction: a Comparison of Carbon and Cosmogenic Nuclide Dating Techniques, *AGU Fall Meeting 2008*, H51D-0852.
- Scheingross, J.S.**, S.D. Schoville, and G.K. Roderick. 2007. The use of species distribution models in determining areas of conservation and measuring the effects of climate change on alpine butterflies. 92nd annual meeting of the Ecological Society of America, August 5 - 10, 2007, San Jose, CA, USA. (Abstract-ESA2007).