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 and B.S., Environmental Science, University of California, Berkeley, 2007

Honors and awards

AGU Luna B. Leopold Young Scientist Award (2019)
AGU Fall Meeting Robert P. Sharp Lecture invited speaker (2019)
Alexander von Humboldt Postdoctoral Fellow (2015 – 2017)
Outstanding Student Presentation Award, AGU Fall Meeting (2013)
National Science Foundation Graduate Research Fellowship Program fellow (2011-2014)
National Center for Airborne Laser Mapping (NCALM) seed grant recipient (2010)
UC Berkeley, Earth and Planetary Science Department Citation (2007)
Charles H. Ramsden Research Fellow, UC Berkeley (2007)
NSF Research Experience for Undergraduates fellow, Oregon State University (2006)

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

ORCID | Google Scholar

In Review and Revision

Scheingross, J.S. and M.P. Lamb, in review, Thresholds of sediment scour and bedrock erosion in waterfall plunge pools.

Scheingross, J.S., Limaye, A.B., McCoy, S.M., and A.C. Whittaker, in review, The shaping of bedrock landscapes by internal dynamics, submitted to *Nature Reviews Earth & Environment*.

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

In Press and Print

14. Repasch, M., Wittmann, H., **Scheingross, J.S.**, Hovius, N., Sachse, D., Szupiany, R., and O. Orfeo, **in press**, Sediment transit time and floodplain storage dynamics in alluvial rivers revealed by meteoric ^{10}Be, *JGR Earth Surface*.
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: Kauaʻi, Hawaiʻi, *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.

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.

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, AGU Fall Meeting, 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

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, Goldschmidt (2020)
Session convener, AGU Fall Meeting (2014 – 2018, 2020)
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*, *Science Advances*, 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