

## Joel S. Scheingross (he/him/his)

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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

#### *International and National Level*

AGU Editors' Citation for Excellence in Refereeing (2021)  
AGU [Luna B. Leopold Early Career Award](#) and AGU Fall Meeting [Robert P. Sharp Lecture](#) invited speaker (2019)  
*Awarded annually by the AGU Earth and Planetary Surface Processes section. My contribution are summarized in the [award citation from Dr. Kelin Whipple](#) and the [award presentation and lecture](#).*  
Outstanding Student Presentation Award, AGU Fall Meeting (2013)

#### *University Level*

University of Nevada Reno Patricia Berninsone Award for Outstanding Service (2022)  
*Awarded annually by the UNR College of Science. My award was in recognition of my DEI contributions.*  
Making-a-difference Award for Dedication to Justice, Equity, Diversity, and Inclusivity in the Geosciences (2022)  
*Awarded annually by the UNR Geoscience Community (including the Department of Geological Sciences and Engineering, the Nevada Bureau of Mines and Geology, and the Nevada Seismological Laboratory).*  
UC Berkeley, Earth and Planetary Science Department Citation (2007)  
*Awarded annually to the top graduating undergraduate in the Earth and Planetary Science Department.*

### Funding and awards

NSF EAR Low Temperature Geochemistry and Geobiology and Geomorphology and Land Use Dynamics, “EAR Climate Collaborative Research: Physical Controls on CO<sub>2</sub> Release from Shale Weathering” (EAR 214519), J.S. Scheingross (PI) and M. Torres (co-PI, Rice University), \$378,521 to UNR (1 July 2022 – 30 August 2025).  
NSF EAR Geomorphology and Land Use Dynamics, “Formation, morphology and retreat of autogenic waterfalls” (EAR 1946342), J.S. Scheingross (PI) and S.M. McCoy (co-I), \$365,149 to UNR (1 Aug. 2020 – 30 July 2023).  
Alexander von Humboldt Postdoctoral Fellow (2015 – 2017)  
NSF Graduate Research Fellowship Program fellow (2011-2014)  
National Center for Airborne Laser Mapping (NCALM) Seed Grant (2010)  
NSF Research Experience for Undergraduates, Oregon State University (2006)  
Charles H. Ramsden Research Fellow, UC Berkeley (2007)

### Teaching

Sedimentology and stratigraphy (GEOL 202): Fall 2019, Fall 2020, Fall 2021, Fall 2022  
Fluvial sediment transport and bedrock erosion (GE 430/630): Spring 2021  
Earth science communication: theory and practice (GEOL 740): Spring 2020  
Geology Summer Field (GEOL 451, co-taught, Scheingross teaches 1 week of instruction): Summer 2021, Summer 2022  
Earth surface processes seminar and reading group (GEOL 701): Every semester (since 2019)

Introduction to the UNR Geoscience Graduate Program (GEOL 710): Fall 2022

## Advising

### *Current graduate students*

Mara Nutt, Masters Student, University of Nevada Reno, 2021 - present

Michael Robinson, PhD Student, University of Nevada Reno, 2021 - present

Sophie Rothman, PhD student, University of Nevada Reno (co-advised with Scott McCoy), 2019 – present

### *Current undergraduate students*

Dennis Garcia, NevadaTeach Intern, 2021 - Present

### *Former graduate students*

Erika Groh, MS 2021, University of Nevada Reno, Morphologic signatures of autogenic waterfalls: A case study in the San Gabriel Mountains, California. (Now at Balance Hydrologics)

Nina Golombek, MS 2019, University of Potsdam, Germany (co-advised with Niels Hovius), Seasonality of organic carbon export and stable isotopic signatures in an Andean lowland River. (Now completing a PhD at Dalhousie University)

### *Former undergraduate and high school students*

Tarra Mora, McNair Scholar, Jan. – Sept 2022, Automated waterfall identification in the Sierra Nevada, CA

Ramona Schneider, Winter 2018, Experimental investigation of silicate weathering during fluvial transport

Toni Schmidt, Spring 2017, Experimental investigation of organic carbon oxidation during river transport

Nina Golombek, 2016-2017, Oxidation of organic carbon in the Rio Bermejo, Argentina

Juliane Preimesberger, Summer 2014, Bedrock erosion experiments at steep slopes

Gheorghe Schreiber, Summer 2013, The role of mixed grain size distributions in fluvial bedrock incision

Khadijah Omerdin, 2012-2013, Bedrock erosion by suspended sediment

Daniel Lo, Summer 2012, Foam and waterfall erosion experiments

Conor O'Toole, Summers 2010 and 2011, Waterfall sediment transport and erosion experiments

## Contributions to justice, equity, diversity and inclusion (JEDI)

UNR Geoscience Community Diversity, Equity, and Inclusion founder and Committee Chair (2020 – present)

UNR Geoscience Community Unlearning Racism in the Geoscience Pod Leader (2021)

UNR Graduate Program of Hydrologic Sciences Diversity, Equity, and Inclusion Committee founding member (2020 – present)

### *Accomplishments I lead or substantially contributed to:*

- Established of a UNR Geoscience Community Diversity, Equity, and Inclusion Committee (2020)
- Initiated a major overhaul of the UNR Geoscience department webpage to showcase our commitment to diversity, display demographic data, and create a transparent list of diversity-related goals and accomplishments
- Created a centralized repository for pre-existing outreach and volunteer opportunities available at UNR and in the greater Reno community (2020-2021)
- Organize, administer and analyze results from an annual climate survey to poll members of the UNR Geoscience community (starting in academic year 2020-2021).
- Updated the UNR geology department graduate admissions page to explicitly include tips for building a successful application (including tips for contacting prospective advisers) that is traditionally part of the 'hidden curriculum' and may not be common knowledge for students of all backgrounds (2021)
- Co-drafted and edited a Code of Conduct which has been adopted by the UNR Geoscience community and is covered in all geology department courses. (2020-2021)
- Organized invited departmental seminars from diverse speakers and encouraged all speakers to speak about issues related to diversity, equity, inclusion and justice (sometimes in a separate talk) if they wish (ongoing since 2020)
- Organized professional development and JEDI panel discussions for the AGU Earth and Planetary Surface Processes online seminar series (e.g., [The Intersection of Geomorphology and Environmental Justice](#) and [Building a Supporting Research Community](#)) (2020).
- Served as a mentor to a post-baccalaureate student through the Geosciences Education & Mentorship Support (GEMS) program (sponsored by the National Association of Geoscience Teachers), which focuses on providing

mentorship to graduate students and prospective graduate students from historically excluded groups in the geosciences. (2021-2022).

- Currently leading the development of an NSF GEOPATHS proposal bringing together faculty and graduate students from across the UNR Geology, Geography, and Mining Engineering departments to do middle and high school outreach work related to increasing diversity in the geosciences.
- Currently advising and assisting the AGU Earth and Planetary Surface Processes in developing and implementing a climate survey focused on JEDI within the Earth and Planetary Surface Processes community.

*Conference abstracts related to JEDI work:*

**Scheingross, J.S.**, Cao, W., DesOrmeau, J., Gardner, M., Gordon, S.M., De Masi, C., Sheevam, P. and Toller, J., 2021, Progress on JEDI initiatives within the University of Nevada Reno geosciences community, submitted to the American Geophysical Union Fall Meeting.

### Service and outreach

AGU Earth and Planetary Surface Processes (EPSP) Section Secretary (2023 – present)  
AGU Earth and Planetary Surface Processes (EPSP) executive committee member (2017 – present)  
AGU EPSP webmaster and social media co-coordinator (2015 – present)  
AGU EPSP Student Committee Liaison (2019 – 2022)  
AGU EPSP Connects (online seminar/professional development series) co-founder and organizer (2020 – 2021)  
Volunteer for Nevada State Science Teachers Association Science NV CONNECTS program (2021)  
Organizer, AGU EPSP “Ways & Means” mug fundraiser (\$1380 raised, 2018)  
Organizer and co-founder of AGU EPSP “Early Career Geomorphologist Night” (2013-2014)  
Session convener: Goldschmidt (2020), AGU (2014–2018, 2020), EGU (2016 - 2017)  
Reviewer for *Earth Surface Dynamics*, *Earth Surface Processes and Landforms*, *Geology*, *Geophysical Research Letters*, *GSA Bulletin*, *JGR – Earth Surface*, *Science Advances*, Nevada NASA Space Grant, NOAA Sea Grant, US NSF, US-Israel Binational Science Foundation.  
Organizer for Caltech Geoclub seminar series (academic year 2011/2012, summer 2014)  
Member: American Geophysical Union, European Geosciences Union, Geochemical Society  
Regular (6x/yr) guest lecturer, 6<sup>th</sup> Grade Earth Sciences, McKinley Middle School (2010- 2015)  
Caltech *Science Saturday* public outreach lecture (2011)

### Invited Lectures

2022: University of Wyoming, University of Idaho, Washington University in St. Louis  
2021: Humboldt State University, ETH Zürich  
2020: Dalhousie University  
2019: AGU Fall Meeting, Sacramento State University, University of Colorado Boulder  
2018: Ben-Gurion University of the Negev, University Nevada Reno  
2017: UC Berkeley, UC Riverside, UC Santa Barbara, Université Rennes, Universität Tübingen  
2016: Dartmouth College, Imperial College London, University of Edinburgh, Université Grenoble Alpes  
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

### Peer-reviewed publications ([ORCID](#) | [Google Scholar](#)) (\*indicates advised graduate, undergraduate, or high school student)

#### *In Review and Revision*

\*Rothman, S.D., **Scheingross J.S.**, McCoy, S.W., and Dow, H.W., in review, Impacts of autogenic waterfall development on bedrock river long profile morphology.

Inoue, T., Izumi, N., **Scheingross, J.S.**, Hiramatsu, Y., Tanigawa, S., and Sumner, T., in review, Waterfall height sets the mechanism, rate and style of upstream retreat.

\*Feehan, S.A., McCoy, S.W., **Scheingross, J.S.**, Gardner, M.H., in review, The influence of variability in lift, drag, protrusion, friction angle, and particle and fluid density on incipient sediment motion.

#### *In Press and Print*

21. Repasch, M.N., **Scheingross, J.S.**, Hovius, N., Vieth-Hillebrand, A., Mueller, C., Hoeschen, C., Szupiany, R.N., and Sachse, D., 2022, River organic carbon fluxes modulated by hydrodynamic sorting of mineral-bound and free particulate organic matter, *Geophysical Research Letters*, V. 49, Issue: 3, doi: 10.1029/2021GL096343.
20. \*Golombek, N.Y., **Scheingross, J.S.**, Repasch, M.N., Hovius, N., Sachse, D., Lupker, M., Eglinton, T.I., Menges, J., Haghypour, N., Poulson, S.R., Grocke, D.R., Latosinski, F.G., Szupiany, R.N., 2021, Fluvial organic carbon composition regulated by seasonal variability in lowland river migration, *Geophysical Research Letters*, V.48, Issue: 24, doi: 10.1029/2021GL093416.
19. \*Groh, E.L. and **Scheingross, J.S.**, 2022, Morphologic signatures of autogenic waterfalls: A case study in the San Gabriel Mountains, California, *Geology*, V. 50, Issue: 2, doi: 10.1130/G49320.1.
18. Repasch, M., **Scheingross, J.S.**, Hovius, N., Lupker, M., Wittmann, H., Haghypour, N., Grocke, D.R., Orfeo, O., Eglinton, T.I., and D. Sachse, 2021, Fluvial organic carbon cycling regulated by sediment transit time, *Nature Geoscience*, V. 14, p. 842-848, doi: 10.1038/s41561-021-00845-7.
17. **Scheingross, J.S.** and M.P. Lamb, 2021, Mass balance controls on sediment scour and bedrock erosion in waterfall plunge pools, *Geology*, v. 49, doi: 10.1130/G48881.1.
16. **Scheingross, J.S.**, Repasch, M.N., Hovius, N., Sachse, D., Lupker, M., Fuchs, M., Halevy, I., Gröcke, D.R., \*Golombek, N.Y., Haghypour, N., Eglinton, T.I., and O. Orfeo, 2021, Constrains on organic carbon modification and oxidation during transient floodplain storage, *Earth and Planetary Science Letters*, V. 561, doi: 10.1016/j.epsl.2021.116822.
15. **Scheingross, J.S.**, Limaye, A.B., McCoy, S.M., and A.C. Whittaker, 2020, The shaping of erosional landscapes by internal dynamics, V. 1, *Nature Reviews Earth & Environment*, doi: 10.1038/s43017-020-0096-0.
14. Repasch, M., Wittmann, H., **Scheingross, J.S.**, Hovius, N., Sachse, D., Szupiany, R., and O. Orfeo, 2020, Sediment transit time and floodplain storage dynamics in alluvial rivers revealed by meteoric <sup>10</sup>Be, *JGR Earth Surface*, V. 125, doi: 10.1029/2019JF005419.
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.