

# Joel Lawrence Pederson

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## ○ education

University of New Mexico Albuquerque, NM	Ph.D. Earth and Planetary Sciences, 1999: A long-term record of climate-controlled hillslope sedimentation.
Northern Arizona University Flagstaff, AZ	M.S. Geology, 1995: Late Holocene geochronology and paleoclimate of Lake Canyon, Utah.
Gustavus Adolphus College St. Peter, MN	B.A. Geology, 1990, magna cum laude, Thesis: Terraces of River Warren

## ○ professional experience

<u>2014-</u>	<b>Professor Department Head (2016- )</b>	Department of Geosciences, Utah State University
<u>2005-2014</u>	<b>Associate Professor Ex. Dir., USU Luminescence Lab Graduate Director (2010-2015)</b>	Department of Geology, Utah State University
<u>1999-2005</u>	<b>Assistant Professor</b>	Department of Geology, Utah State University
<u>1996-2004</u>	<b>Contract Mapping</b>	New Mexico Bureau of Mines and Geology
<u>1990-1992</u>	<b>Geologist</b>	STS Environmental Consultants, Minneapolis, MN

## ○ recent major grants

<u>2022-2025</u>	<b>NSF-Tectonics</b>	“Exploring the tempo of exhumation and relief development to investigate mantle-to-surface connections around the Yellowstone hotspot”	<b>\$497,900</b> USU = <b>\$99,153</b>
<u>2021-2024</u>	<b>NSF-GLD</b>	“Deciphering the role of extreme rainstorms and hydroclimate regime on arid escarpment retreat and sub-cliff slope evolution”	<b>\$391,975</b> USU = <b>\$55,441</b>
<u>2019-2021</u>	<b>Utah Gov’s Office</b>	Strategic Workforce Investment grant “Geoscience Technology Workforce Pathways”	<b>\$203,675</b>
<u>2013-2016</u>	<b>NSF-TUES</b>	“Development of mobile games for geoscience education using the Colorado Plateau as a virtual classroom”	<b>\$240,797</b>

## ○ awards

- 2021     **Fellow, Geological Society of America**
- 2005     **GSA Biggs Earth Science Teaching Award**
- 2000     **GSA Gladys W. Cole Memorial Research Award**
- 1997     **GSA J. Hoover Mackin Award, for PhD research**

## ○ recent peer-reviewed publications (*Pederson students in italics*)

- Google Scholar site: <http://scholar.google.co.uk/citations?user=ZytbQ6cAAAAJ>

Shmilovitz, Y., Enzel, Y., Morin, E., Armon, M., Matmon, A., Mushkin, A., Pederson, J., and Haviv, I., 2022, Aspect-dependent bedrock weathering, cliff retreat, and cliff morphology in a hyperarid environment: Geological Society of America Bulletin, doi: 10.1130/B36442.1

*Tuzlak, D.*, Pederson, J., Bufe, A. and Rittenour, T., 2022, Patterns of Incision and Deformation on the Southern Flank of the Yellowstone Hotspot from Terraces and Topography: Geological Society of America Bulletin, doi: 10.1130/B35923.1

*McCarroll, N.*, Pederson, J., Hidy, A. and Rittenour, T., 2021, Chronostratigraphy of Talus Flatirons and Piedmont Alluvium along the Book Cliffs, Utah – Testing Models of Dryland Escarpment Evolution: Quaternary Science Reviews, doi: 10.1016/j.quascirev.2021.107286

Riley, K.E., Rittenour, T.M., Pederson, J.L. and Belmont, P., 2019, Erosion rates and patterns in a transient landscape, Grand Staircase, southern Utah: Geology, doi: 10.1130/G45993.1

Townsend, K.F., Nelson, M.S., Rittenour, T.M. and Pederson, J.L., 2019, Anatomy and evolution of a dynamic arroyo system: Kanab Creek, southern Utah, USA: Geological Society of America Bulletin, doi: 10.1130/B35195.1

*Bursztyn N.*, Walker, A, Shelton, B. and Pederson, J.L., 2017, Increasing undergraduate interest to learn geoscience with GPS-based, augmented reality field trips on students' own smartphones: GSA Today: v. 27, no. 6, p. 4-10, doi: 10.1130/GSATG304A.1

*Bursztyn N.*, Walker, A, Shelton, B. and Pederson, J.L., 2017, Assessment of student learning using augmented reality Grand Canyon field trips for mobile smart-devices: Geosphere, v. 13, no. 2, p. 260-268, doi: 10.1130/GES01404.1

Pederson, J.L., Janecke, S.U., Reheis, M.C., Kaufman, D.S. and Oaks, R.Q., Jr., 2016, Chapter 2. The Bear River's history and diversion—constraints, unsolved problems, and implications for the Lake Bonneville record, *in* Oviatt, C.G. and Shroder Jr., J.F., eds., Lake Bonneville: A Scientific Update: Elsevier, p. 28-58.

Pederson, J.L., O'Brien, G.R., Anderson, K.C., and Neff, L.T., 2016, Geomorphic Context of the River-Corridor Cultural Record in Grand Canyon (Ch. 6), *in* Smiley, F.E., Downum, C.E., and Smiley S.G., eds., Archaeology of the Grand Canyon: Ancient Peoples, Ancient Places: Grand Canyon Assoc.