

# Leah Salditch

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*Ph.D., Earth & Planetary Sciences*, Northwestern University, In Progress  
*M.S., Geosciences*, University of Texas at Dallas, May 2016  
*B.A., cum laude, Anthropology*, American University, December 2009  
*A.A., Liberal Arts*, Bard College at Simon's Rock, May 2007

## PUBLICATIONS

Salditch, L., Hough, S.E., Stein, S., Spencer, B.D., Brooks, E.M., Neely, J.S. and Lucas, M.C. (2018). The 1952 Kern County, California earthquake: A case study of issues in the analysis of historical intensity data for estimation of source parameters. *Physics of the Earth and Planetary Interiors*, Vol. 283, p. 140-151.

Brooks, E.M., Stein, S., Spencer, B.D., Salditch, L., Petersen, M.D., and McNamara, D.E. (2017). Assessing Earthquake Hazard Map Performance for Natural and Induced Seismicity in the Central and Eastern United States. *Seismological Research Letters*. Vol. 89(1), p. 118–126, doi: 10.1785/ 0220170124.

Stein, S., Salditch, L., Brooks, E.M., Spencer, B.D., and Campbell, M. (2017). Is the Coast Toast? Exploring Cascadia Earthquake Probabilities. *GSA Today*, Vol. 27(11).

## PRESENTATIONS

Hough, S.E., Salditch, L.M., Stein, S. (2017), A key puzzle piece: revisiting the shaking distribution of the 1952 Kern County, California earthquake, American Geophysical Union, New Orleans, Louisiana.

Salditch, L.M., Brooks, E.M., Stein, S., Spencer, B.D., and Campbell, M. (2017), Long-Term Fault Memory: A New Time-Dependent Recurrence Model for Large Earthquake Clusters on Plate Boundaries, American Geophysical Union, New Orleans, LA.

Salditch, L.M., Brooks, E.M., Stein, S., Spencer, B.D., and Campbell, M. (2017), Modeling the Cascadia Paleoseismic Record of Large Earthquake Clusters using Long-Term Fault Memory, Geological Society of America Annual Meeting, Seattle, Washington.

Salditch, L.M., Brooks, E.M., Stein, S., Spencer, B.D., and Campbell, M. (2017), Large Earthquake Temporal Clustering and Seismic Hazard Assessment, Probabilistic Seismic Hazard Assessment Workshop, Lenzburg, Switzerland.

Salditch, L.M., Brooks, E.M., Stein, S., and Spencer, B.D. (2017), Modeling Earthquake Clusters as Resulting from Long Term Fault Memory, Annual Meeting of the Seismological Society of America, Denver, Colorado.

Salditch, L.M. (Invited Session Chair), Brooks, E.M., Stein, S., and Spencer, B.D. (2016), Are Earthquake Clusters/Supercycles Real or Random? Abstract S44B-08, American Geophysical Union, San Francisco, California.

Salditch, L.M. and Ferguson, J.F., (2016), An animated map of Texas and Oklahoma seismicity from 1973 to the present, GSA South-Central Section Meeting, Baton Rouge, Louisiana, Geological Society of America *Abstracts with Programs*. Vol. 48, No. 1.

Salditch, L.M. and Ferguson, J.F. (2015), An animated map of Texas and Oklahoma seismicity from 1973 to the present, Pioneer Natural Resources, Irving, Texas.

**SCHOLARSHIPS  
& AWARDS**

Student Scholarship, Enrico Fermi School of Physics, *2018*  
Student Travel Grant, AGU Natural Hazards Focus Group, *2017*  
Student Travel Grant, GSA Annual Meeting, *2017*  
Student Fellowship, PSHA Workshop, Lenzburg, Switzerland, *2017*  
Student Presentation Award, Seismological Society of America, *2017*  
UT Dallas Selden Leavell Scholarship, *2016*  
Pioneer Natural Resources Geoscience Scholarship, *2015–2016*  
PMA Memorial Scholarship, *2014*  
American University Dean's List, *2009*  
Simon's Rock Alumni Scholarship, *2005*

**COMPUTER SKILLS**

Proficient in Excel, MATLAB, R, Unix/Bash, Adobe Illustrator, Generic Mapping Tools, Latex, ArcGIS, and Python.

**EXPERIENCE**

**Teaching Assistant**

Northwestern University, Evanston, Illinois  
*April 2017–June 2017*

Taught laboratory sections with 40 students, graded weekly assignments, assisted in field activities for: The Ocean, The Atmosphere, & Our Climate.

**Teaching Assistant**

University of Texas at Dallas, Richardson, Texas  
*August 2015–May 2016*

Engaged with students to enhance understanding of class topics and graded homework assignments for courses in: Physical Geology Lab and Lecture, Physics and Chemistry of the Solid Earth, and Data Analysis for Geoscientists.

**Hastings Gravity Survey**

University of Texas at Dallas, US Department of Energy, and Denbury Onshore LLC  
Pearland, Texas  
*November 2015*

Collected relative gravity data from nearly 100 sites using Scintrex CG-5 Autograv gravity meters; organized efficient gravity station occupations.

**Tutor**

The Tutoring Place, Dallas, Texas  
*July 2014–August 2015*

Tutored elementary, middle, high school and college students in arithmetic, algebra, geometry, pre-calculus, calculus, chemistry, English, writing, and SAT/ACT prep.

**Archaeological Field Technician**

HDR, Inc., Dallas, Texas  
*June 2011–August 2012*

Recipient of 2011 HDR Pathfinder Award for Excellence; performed surveys and excavations of archaeological sites, analyzed soil and stratigraphy of survey areas, identified and collected archaeological artifacts, created maps of findings, collected GPS waypoints using a Trimble GPS unit and examined findings using ArcGIS.

## Archaeological Field and Laboratory Technician

EcoPlan Associates, Inc., Mesa, Arizona

*May–October 2010*

Performed archaeological excavations and created maps of soil profiles and findings in trench units; prepared macrofloral soil flotation specimen from soil samples collected in the field and analyzed results; cleaned, labelled, and prepared artifacts for curation in AZ state archaeological repository.

### SERVICE

**Speaker**, Covenant Home of Chicago, Chicago, Illinois, June 2017

Presented senior citizen residents of this assisted-living facility with a policy-oriented talk about the issues surrounding hydraulic fracturing with the NU Science Policy Outreach Taskforce.

**Science Fair Judge**, McCutcheon Elementary School, Chicago, Illinois, December 2016

Judged projects from grades 6-8, heard presentations and engaged with students to assess understanding of project and mastery of skills.

**Activity Leader**, Brentfield Elementary Science Night, Richardson, Texas, *October 2015*

Planned and led activities to introduce elementary school students to earth science concepts in a hands-on, interactive learning environment.

**Paleo-Lab Volunteer Fossil Preparator**, Perot Museum of Nature and Science, Dallas,

Texas, *December 2010–June 2011*

Prepared fossilized bones of the Alamosaurus dinosaur using pneumatic chisels for display in museum exhibit; created plaster molds and cradles for safe transport and storage of fossils.

### ORGANIZATIONS & ACTIVITIES

AGU Student/Early Career Representative, Natural Hazards Focus Group

Northwestern University Geoclub, President 2018-2019; Treasurer 2017-2018

Northwestern Graduate Leadership and Advocacy Council, Department Representative

AAPG Imperial Barrel Award 2015, University of Texas at Dallas Team Member

University of Texas at Dallas GeoClub, Travel Committee Chair

### SHORT COURSES

**Introduction to Databases and SQL:** July 2018

Northwestern University Research Computing

**The Mechanics of Earthquake Faulting:** July 2018

Enrico Fermi School of Physics, Italian Physical Society, Varenna, Italy

**Probabilistic Seismic Hazard Assessment:** April 2017

Seismological Society of America Annual Meeting, Denver

**Introduction to R Workshop:** February 2016

Northwestern University Libraries

**USArray Data Processing and Analysis:** August 2016

IRIS-Earthscope at Northwestern University

**Fundamentals of Basin Evaluation and Quantitative Prospect Assessment:** March 2016

AAPG Distinguished Lecturer Larry Garnezy at The University of Texas at Dallas

**BHL Boresight Horizontal Geosteering:** September 2015  
BHL Consulting Inc. at The University of Texas at Dallas