

**Amanda Keen-Zebert, PhD, MBA (she/her)**  
**Program Director (Rotator) National Science Foundation**  
**Research Professor, Director E.L. Cord Luminescence Laboratory**  
**Desert Research Institute | 2215 Raggio Parkway, Reno, NV 89512-1095 | akz@dri.edu**

## **APPOINTMENTS**

### **2021-Present National Science Foundation, Geosciences Directorate, EAR Division**

**Program Director** for Earth Sciences Instrumentation and Facilities (FY23-24, program lead FY24), Geomorphology and Land Use Dynamics (GLD) (FY21-24), Frontier Research in Earth Sciences (FRES) (FY22). **Cross Directorate Interest Groups (CDIGs):** Mid-Career Award (FY21-22), and Wildland Fire Initiative (FY22-24). **Other working groups:** MRI Working Group, GEO Innovations Champions, EAR Communications Working Group.

- Ensure, manage, and oversee the proposal merit review process including intellectual merit and broader impacts.
- Develop and maintain a balanced portfolio of awards including diversity, inclusion, and scientific merit through expenditure and management of program resources (annual budgets: GLD \$7M, FRES \$12M, EAR/IF \$21M)
- Develop new funding opportunities for CDIGs by gathering feedback and evaluating community needs and working through the NSF business processes to create new solicitations and other funding opportunities.
- Communication, in-reach, and outreach for programs, CDIGs, and EAR Division.
  - Organized and led first annual MCA PI meeting.
- Coordinate and communicate innovation initiatives on behalf of EAR for Geosciences Directorate.
- Lead for private philanthropic collaborations and international agency collaborations for Wildland Fire Initiative CDIG.

### **2013-Present Desert Research Institute (DRI), Reno, NV. *Positions and description of duties:***

#### **Deputy Director, Division of Earth and Ecosystem Sciences (DEES) (2020-2021)**

- Supervisor to early career faculty (Rank I and II) for DEES.
- Assist and support DEES Director and business staff.
- Contribute to division decision making including allocation of resources.
- Supervisor to Office of Education during transition from OED to DEES.

### **Strategic Planning (2019-2021)**

- Led institute in re-defining the vision and mission of the institute and in developing a strategic plan for 2020-2025. <https://www.dri.edu/strategicplan/>
- Develop broad buy-in and consensus among academic faculty, administrative staff, and external partners including DRI Foundation, Chancellor, and the Board of Regents of the Nevada System of Higher Education.
- Led internal and external communication of the strategic plan.
- Developed implementation, metrics, tracking, of progress toward strategic goals and maintain alignment of new initiatives with vision, mission, and strategic plan.

### **Faculty Senate Chair (FY2020, served on Executive Council 2018-2021)**

- Served as the lead representative and advocate for DRI faculty to the Chancellor and Board of Regents of the Nevada System of Higher Education Institutions; other agencies and organizations including other state agencies and higher education organizations; and with the public, accurately reflecting the policies of DRI and advocating on behalf of faculty.
- Contributed to improving the quality of policies and DRI's performance of its mission.
  - Initiated and led development and implementation of DRI's Scientific Integrity and Professional Ethics policy.
  - Facilitated development of an institute-wide committee focused on inclusion, diversity, equity, and accessibility (IDEA) to elevate and address institutional performance and goals related to these issues.
- Contributed to development of short- and long-range plans and goals and objectives for DRI research programs and the development and allocation of DRI budget.
- Served on special project and ad hoc functional teams across DRI to solve problems, improve communication, and effect coordination for special programs.
- Led DRI-wide evaluation and developed recommendations for laboratory and field infrastructure sustainability.
- Served on DRI's Issues Management Group to develop and implement policy and protocols to mitigate institute-wide impacts of the COVID-19 pandemic.

### **Professor, Director E.L. Cord Luminescence Laboratory. (2021-present, Associate Professor 2017-2021. Assistant Professor 2013-2017.)**

- Design, plan, develop, and maintain a soft-money funded research program and laboratory that supports students, staff scientists, research colleagues, and visiting researchers through grants and contracts. Teach courses and advise graduate students. Graduate faculty at University of Nevada Reno Department of Geological Sciences and Engineering, Environmental Science and Health Program, and Hydrological Sciences Program.

- 2010-2013** Assistant Professor, Dept. of Geosciences, Murray State University, Murray, KY.
- 2008-2010** National Science Foundation International Research Post-Doctoral Fellow, Institute of Geography and Earth Science, Aberystwyth University, Aberystwyth, Wales, UK.

### **PROFESSIONAL PREPARATION**

- 2019-2021** M.B.A., University of Illinois, Urbana-Champaign, Gies School of Business. Focus areas: Entrepreneurship and Strategic Innovation; Digital Marketing
- 2002-2007** Ph.D. Environmental Geography, Texas State University.
- 1999-2001** M.A. Geography, University of Arkansas.
- 1994-1999** B.A. Geography, University of Arkansas.

### **Continuing Education**

- 2022-present** Harvard Kennedy School of Government Executive Education Program in Public Leadership. (2/3 Complete)
- 2022-2023** CoActive Training Institute Coach Training Program.

### **RECOGNITION & AWARDS**

2015 Nevada Regents' Rising Star Researcher Award (\$5,000)

### **My research program has centered on a variety of Earth Science, Geomorphology, and Quaternary Science topics and has been featured in and supported by:**

- > 30 Peer-reviewed publications including several student co-author and advisee led publications in a variety of Earth Science focused journals.
- > \$4.5m in external competitive funding from National Science Foundation awards, Congressionally Directed Spending Requests, and a variety of contracts with state, federal, industry, and academic partners.
- > 80 Presentations and Abstracts.
- >15 Invited lectures and Seminars.

Multiple graduate and undergraduate research student advisees, visiting researchers and students, and several courses taught in a variety of Earth Science topics.

(Full CV on following pages)

**PEER REVIEWED PUBLICATIONS (\*Indicates student co-author, \*\* Indicates advisee co-author)**

**Published**

- \*\*Rodrigues, K., **Keen-Zebert, A.**, Shepherd, S., Hudson, M.R., Bitting, C.J., Johnson, B.G. and Langston, A., (2023). The role of lithology and climate on bedrock river incision and terrace development along the Buffalo National River, Arkansas. *Quaternary Research*, pp.1-15. DOI: [10.1017/qua.2023.16](https://doi.org/10.1017/qua.2023.16)
- Schmidt, A.H., Collins, B.D., **Keen-Zebert, A.**, Guedes, J.D.A., Hein, A., Womack, A., McGuire, C., Feathers, J., Persico, L., Fiallo, D. and Tang, Y., (2023). Implications of the loess record for Holocene climate and human settlement in Heye Catchment, Jiuzhaigou, eastern Tibetan Plateau, Sichuan, China. *Quaternary Research*, 112, pp.36-50. DOI: [10.1017/qua.2022.44](https://doi.org/10.1017/qua.2022.44)
- Mahan, S.A., Rittenour, T.M., Nelson, M.S., Ataee, N., Brown, N., DeWitt, R., Durcan, J., Evans, M., Feathers, J., Frouin, M., Guérin, G., Heydari, M., Huot, S., Jain, M., **Keen-Zebert, A.**, Li, B., Lopez, G., Neudorf, C., Porat, N., Rodrigues, R., Sawakuchi, A.O., Spencer, J.Q.G., Thomsen, K., (2022). Guide for interpreting and reporting luminescence dating results. *GSA Bulletin*, 135(5-6), pp.1480-1502. DOI: [10.1130/B36404.1](https://doi.org/10.1130/B36404.1)
- \*\*Rodrigues, K., Huot, S. and **Keen-Zebert, A.**, (2022). Exploring the application of blue and red thermoluminescence for dating volcanic glasses. *Radiation Measurements*, 153, p.106731. DOI: [10.1016/j.radmeas.2022.106731](https://doi.org/10.1016/j.radmeas.2022.106731)
- Lancaster, N., Bacon, S., Bullard, T., Neudorf, C., **Keen-Zebert, A.** 2021. Tectonic, hydrogeologic, and climatic controls on Late Holocene dune formation, China Lake basin, Indian Wells Valley, California, USA. *Quaternary Research*. DOI: [10.1017/qua.2021.62](https://doi.org/10.1017/qua.2021.62)
- \*Chupik, C., Koehler, R., **Keen-Zebert, A.** (2021) Quaternary mapping, and paleoseismic investigation of the Warm Springs Valley fault, northern Walker Lane, Nevada-northern California. *Bulletin of the Seismological Society of America*.
- \*Young, E.K., Cowgill, E., Scharer, K., Anderson-Meritt, E., **Keen-Zebert, A.**, Weldon, R. (2021) Late Holocene Slip Rate of the Mohave Section of the San Andreas Fault near Palmdale, California. *Bulletin of the Seismological Society of America*.
- \*De Masi, C., Koehler, R., Dee, S., **Keen-Zebert, A.** (2021) Early development of strike-slip faulting: paleoseismic study along the Petersen Mountain fault, northern Walker Lane. *Journal of Quaternary Science*. [doi.org/10.1002/jqs.3283](https://doi.org/10.1002/jqs.3283)
- \*Gray, H., **Keen-Zebert, A.**, Furbish, D., Tucker, G., Mahan, S. (2020) Depth-dependent soil mixing persists across climate zones. *Proceedings of the National Academy of Sciences (PNAS)*. [doi.org/10.1073/pnas.1914140117](https://doi.org/10.1073/pnas.1914140117)
- \*Bacon, S., Bullard, T., **Keen-Zebert, A.**, Jayko, A., Decker, D. (2019) Spatiotemporal patterns of distributed slip in southern Owens Valley indicated by deformation of late Pleistocene shorelines, eastern California. *Geological Society of America Bulletin*. [doi.org/10.1130/B35247.1](https://doi.org/10.1130/B35247.1)
- Davis, L.G., Madsen, D.B., Becerra-Valdivia, L., Higham, T., Sisson, D.A., Skinner, S.M., Stueber, D., Nyers, A.J., **Keen-Zebert, A.**, Neudorf, C. and Cheyney, M., 2019.

- Late Upper Paleolithic occupation at Cooper's Ferry, Idaho, USA, ~ 16,000 years ago. *Science*, 365(6456), pp.891-897. [doi.org/10.1126/science.aax9830](https://doi.org/10.1126/science.aax9830)
- \*Fulop, E., Johnson, B.G., **Keen-Zebert, A.** 2019. A geochronology supported soil chronosequence for establishing the timing of shoreline parabolic dune stabilization. *Catena*. [doi.org/10.1016/j.catena.2019.03.018](https://doi.org/10.1016/j.catena.2019.03.018)
- Bierman, P., Fosdick, J., Guenther, W., **Keen-Zebert, A.**, Koppers, A.A.P., Shmitz, M.D., Schoene, B. 2019. A Deeper Investment for deep time science. *EOS*, 99. [doi.org/10.1029/2018EO112125](https://doi.org/10.1029/2018EO112125)
- Furbish, D.J., Schumer, R., **Keen-Zebert, A.**, 2018. The rarefied (non-continuum) conditions of tracer particle transport in soils, with implications for assessing the intensity and depth dependence of mixing from geochronology. *Earth Surface Dynamics*, 6(4), pp.1169-1202. [doi: 10.5194/esurf-6-1169-2018](https://doi.org/10.5194/esurf-6-1169-2018)
- Williams, T.J., Collins, M.B., \*\*Rodrigues, K.D., Rink, W.J., Velchoff1, N., **Keen-Zebert, A.**, Gilmer, A., Frederick, C.D., Ayala1, S.J. (2018) Evidence of an Early Projectile Point Technology in North America at the Gault Site, Texas, U.S. *Science Advances*. [DOI: 10.1126/sciadv.aar5954](https://doi.org/10.1126/sciadv.aar5954)
- Furbish, D., Roering, J., **Keen-Zebert, A.**, Almond, P., \*Doane, T., Schumer, R. (2018) Soil particle transport and mixing near a hillslope crest: 2. Cosmogenic nuclide and optically stimulated luminescence tracers. *Journal of Geophysical Research-Earth Surface*.123:1078-1093. [DOI: 10.1029/2017JF004316](https://doi.org/10.1029/2017JF004316)
- \*\*Beeson, H.W., McCoy, S.W., **Keen-Zebert, A.** 2017. Geometric disequilibrium of river basins produces long-lived transient landscapes. *Earth and Planetary Science Letters*, 475, 34-43. [doi.org/10.1016/j.epsl.2017.07.010](https://doi.org/10.1016/j.epsl.2017.07.010)
- Keen-Zebert, A.**, Shepherd, S., Hudson, M, \*Thaler, E. (2017). The impact of lithology on valley width, terrace distribution, and bedload provenance in a fluvial system with flat-lying stratigraphy and low uplift. *Earth Surface Processes and Landforms*.42:1573-1587. [doi: 10.1002/esp.4116](https://doi.org/10.1002/esp.4116)
- \*Larkin Z., Ralph, T., Tooth, S., Duller, G.A.T., McCarthy, T.S., **Keen-Zebert, A.**, Humphries, M. (2017). Timescales and mechanisms of river avulsion in a rapidly adjusting South African floodplain wetland. *Geomorphology* 238: 158-172. [doi: 10.1016/j.geomorph.2017.01.021](https://doi.org/10.1016/j.geomorph.2017.01.021)
- Keen-Zebert A.**, Tooth, S., Stuart, F. (2016). Cosmogenic <sup>3</sup>He measurements provide insight on lithological controls on bedrock river incision and valley formation: an example from the South African Interior. *Journal of Geology* 124: 423-434. [doi:10.1086/685506](https://doi.org/10.1086/685506)
- Nicoll, K. and **Keen-Zebert, A.** (2016). Initial chronological determinations at an Archaic site discovered near Stockton, Utah. *Journal of Archaeological Science Reports* 6: 418–423. [doi:10.1016/j.jasrep.2016.02.026](https://doi.org/10.1016/j.jasrep.2016.02.026)
- \*\*Rodrigues, K., Rink, W.J., Collins, M.B., Williams, T.J., **Keen-Zebert, A.**, Lopez, G.I., and Rodrigues, K. (2016). OSL ages of the Clovis, Late Paleoindian and Archaic components at Area 15 of the Gault Site, Central Texas, U.S.A. *Journal of Archaeological Science Reports* 7: 94-103. [doi:10.1016/j.jasrep.2016.03.014](https://doi.org/10.1016/j.jasrep.2016.03.014)

- Keen-Zebert, A.**, (2015) Luminescence, Fluvial Sediments. In Rink, W.J., Thompson, J.W. (Eds.) *Encyclopedia of Scientific Dating Methods*, Springer-Verlag, Berlin-Heidelberg. 465-469. [doi:10.1007/978-94-007-6326-5\\_3-1](https://doi.org/10.1007/978-94-007-6326-5_3-1)
- Tooth, S., McCarthy, T., Rodnight, H., **Keen-Zebert, A.**, Rowberry, M., Brandt, D. (2014) Late Holocene development of a major fluvial discontinuity in floodplain wetlands of the Blood River, eastern South Africa. *Geomorphology* 205: 128-141. [doi:10.1016/j.geomorph.2011.12.045](https://doi.org/10.1016/j.geomorph.2011.12.045)
- Keen-Zebert, A.**, Tooth, S., Rodnight H., Duller, G.A.T., Roberts, H.R., Grenfell, M. (2013). Late Quaternary floodplain reworking and the preservation of alluvial sedimentary archives in unconfined and confined valleys of mixed bedrock-alluvial rivers in the eastern interior of South Africa. *Geomorphology* 185: 54-66. [doi:10.1016/j.geomorph.2012.12.004](https://doi.org/10.1016/j.geomorph.2012.12.004)
- Keen-Zebert, A.**, Tooth, S., Grenfell, M. (2011). Floodplain chronology of the Stillerust Vlei, Mooi River floodplain wetland, in western KwaZulu-Natal, South Africa. In: Bierman P, Montgomery D (eds.) *Key Concepts in Geomorphology, Vignettes*. <http://serc.carleton.edu/60232>
- Keen-Zebert, A.**, Shepherd, S. (2011). Effects of urbanization on stream morphology in the Illinois River watershed, AR. In: Bierman P, Montgomery D (eds.) *Key Concepts in Geomorphology, Vignettes*. <http://serc.carleton.edu/60231>
- Keen-Zebert, A.**, Curran, J.C. (2009). Regional and local controls on the spatial distribution of bedrock reaches in the Upper Guadalupe River, Texas. *Geomorphology*: 112: 295-305. DOI: 10.1016/j.geomorph.2009.06.017. [doi:10.1016/j.geomorph.2009.06.017](https://doi.org/10.1016/j.geomorph.2009.06.017)
- Keen-Zebert, A.** (2007). Channel response to precipitation in urban catchments: Scull and Mud Creeks in Fayetteville, Arkansas. *Physical Geography* 28: 249-260. [doi: 10.2747/0272-3646.28.3.249](https://doi.org/10.2747/0272-3646.28.3.249)

## **OTHER PUBLICATIONS**

**Keen-Zebert A.** 2020. Desert Research Institute Strategic Plan 2020-2025.

**Keen-Zebert A.** 2009. Steel Creek. In R. Hayes (ed.) *Thoreau's Legacy, American Stories of Global Change*. Penguin Classics: Cambridge, MA.

## **EXTERNAL FUNDING**

### **GRANTS**

#### **Current awards**

**Keen-Zebert, A.**, Adams, K., Rodrigues, K. 2020-2024. Testing the impact of reworking on the isochronicity of tephras deposited in diverse sedimentary environments. NSF,

- Sedimentary Geology and Paleobiology. \$359,810.
- Zuza, A., Haproff, C., **Keen-Zebert, A.** 2019-2024. How does it end? Investigating the kinematic linkage between strike-slip and thrust faulting at the western termination of the Haiyuan fault, northern Tibet. NSF Tectonics. \$11,600.
- Keen-Zebert, A.** 2017-2024. Laboratory Technician Support: Luminescence Geochronology. NSF Instrumentation and Facilities. \$680,536

### Past awards

- Wriston, T., Neudorf, C., **Keen-Zebert, A.** (Key Collaborator), Collins, M. 2020-2023. Developing luminescence dating methods to better understand people through time and place in Lincoln County, Nevada. Bureau of Land Management Lincoln County Archaeology Investigation. \$232,839
- Wriston, T., Adams, K., **Keen-Zebert, A.** (Key Collaborator), Collins, M. 2017-2020. Late Pleistocene to Middle Holocene Landscape use in Coal Valley, Basin and Range National Monument, Lincoln County, Nevada. Bureau of Land Management Lincoln County Archaeology Investigation. \$247,709.
- Wriston, T., Adams, K., Rhode, D., Collins, M., **Keen-Zebert, A.** (Key Collaborator). 2018-2021. The archaeological, alluvial, and wetland history of Meadow Valley Wash and its tributaries, Lincoln County, Nevada.
- Wriston, T., Adams, K., **Keen-Zebert, A.** 2017-2020. Late Pleistocene to Middle Holocene Landscape use in Coal Valley, Basin and Range National Monument, Lincoln County, Nevada. Bureau of Land Management Lincoln County Archaeology Investigation. \$247,709
- Tooth, S., **Keen-Zebert, A.**, and Stuart, F. A paired cosmogenic isotope ( $^3\text{He}$ ,  $^{36}\text{Cl}$ ) approach to determine rates of bedrock river incision on the South African Highveld: implications for landscape development in a post-orogenic setting. Natural Environment Research Council, Cosmogenic Isotope Analysis Facility, GBP £7,210. (~USD \$8,915)
- Keen-Zebert, A.** 2014-2019. MRI: Acquisition of a Canberra Broad Energy Germanium Detector BE3830 Gamma Spectroscopy System. NSF Major Research Instrumentation, USD \$162,357.
- Keen-Zebert, A.** 2013-2019. Collaborative Research: Defining the role of heterogeneous lithology in bedrock channel incision and terrace formation in the Buffalo National River, Arkansas. NSF Geomorphology and Land Use Dynamics, USD \$312,809 (Research Collaborative grant with S. Shepherd, Auburn University).
- Cowgill, E., **Keen-Zebert, A.** 2017-2018. Determining the Holocene slip rate of the Mojave San Andreas via Luminescence dating at Pearblosson and Ranch Center. Southern California Earthquake Center. \$40,833
- Keen-Zebert, A.** 2014-2015. A natural experiment for luminescence signal resetting. Army Research Office (ARO) Short Term Innovative Research (STIR). Environmental Sciences Division, USD \$49,994.
- Keen-Zebert, A.** 2010-2013. Constraining the depositional age of sediments at the Gault

Archaeology Site using OSL. National Science Foundation subcontract. USD \$13,000.

**Keen-Zebert, A.** 2008-2010. Determining bedrock incision rates using cosmogenic isotope ( $^3\text{He}$ ) analysis to chronologically constrain the wetland development cycle in the South African Highveld. National Science Foundation International Research Fellowship Program, USD \$218,797.

**Keen-Zebert, A.,** Curran, J.C. 2005-2007. Spatial and temporal variation of sediment transport capacity and channel reach type in two mixed alluvial-bedrock rivers in central Texas. National Science Foundation Doctoral Dissertation Research Improvement, USD \$11,500.

## CONTRACTS

2020-2025. Paleoflood analysis of US Dams and Rivers. Keith Kelson, U.S.Army Corps  
~\$350,000

2019-2021. Geochronology of the Taylor Valley, Antarctica. Peter Doran. \$13,992.

2018-2019. Geochronological determination of Desert Dust, Grass Valley, Distal Orb projects and sites. Far Western Anthropological Group. Craig Young. \$19,792

2018-2019. North Valley slip rates. University of Nevada Reno. Rich Koehler. \$5,653

2015-2018. Phase I Erosion Studies at the West Valley Demonstration Project and Western New York Nuclear Service Center. Enviro Compliance Solutions, Inc., USD \$50,000.

2015-2018. Evaluation of Slip Rates on King Mountain Fault using OSL. Bureau of Land Management. Joanna Redwine. USD \$12,500.

2017. Bracketing slip rates on the Mojave San Andreas using feldspar IRSL luminescence dating. Eric Cowgill. USD \$7,600.

2015-17. Geochronology of late Pleistocene sediment transport on moraine hillslopes. Dan Morgan, David Furbish. USD \$7,693.

2015-7. Long-term footprint of anthropogenic pollution from a 5000 year old industrialized landscape in southern Jordan. Russ Adams. USD \$ 14,000.

2015-17. Migration rate of Green Point and Elberta Dune Complexes in northern MI. Bradley Johnson. USD \$4,007.

2015-16. Defining the geochronology of the Jiuzhaigou terraces, China. A. Schmidt. USD \$5,084.

2015. Luminescence dating of sediment from sand dunes at Antioch Dunes National Wildlife Reserve. Alison McNally, UC Davis. USD \$6,780.

2015. Luminescence dating: Trench 2, Anderson Dam, Morgan Hill, CA. Chris Bloszies, Lettis Consultants International. USD \$5,424.

2015. Luminescence dating of sediment from the City of San Francisco's southeast water pollution control plant building 521 replacement project. Phil Kaijankoski. Far Western Anthropological Research Group, Inc. USD \$2,712.



2014. Luminescence dating of sediment from sand dunes at the San Francisco Peninsula, California. Phil Kaijankoski. Far Western Anthropological Research Group, Inc. USD \$5,424.

### **COMPETITIVE INTERNAL FUNDING**

**Keen-Zebert, A.,** Neudorf, C. 2020. Acquisition of LexSyg Research Luminescence Reader system . DRI Capacity Building Fund, \$160,000.

**Keen-Zebert, A.** 2017. Expanding the geochronology of the Cooper's Ferry Archaeological Site. DRI Lander Foundation Fund, \$26,000.

**Keen-Zebert, A.** 2016. Refining the geochronology of the Cooper's Ferry Archaeological Site. DRI Lander Foundation Fund, \$23,907.

**Keen-Zebert, A.** 2015-16. Elucidating the relationship between luminescence sensitivity and signal resetting in a natural, known-discharge flow. DRI Institute Project Assignment, \$16,405.

**Keen-Zebert, A.** 2015. Colorado River Pulse Flow. DRI Division of Earth and Ecosystem Services, \$3,000.

**Keen-Zebert, A.** 2014. Controls on the formation and stability of tree-covered islands on the anabranching Vaal River, Free State South Africa: biodiversity hotspots along a semi-arid river. Vice President for Research Office, \$12,000.

**Keen-Zebert, A.** 2014. Course development: Introduction to Luminescence Dating. DRI Vice President for Academic and Faculty Affairs Office, \$10,000.

### **TEACHING EXPERIENCE (G=GRADUATE, U=UNDERGRADUATE)**

#### **Desert Research Institute**

##### **2013-present**

Hydrology Program Seminar and Scientific Communication (G)

Special topics: Quaternary Environments (G)

Special topics: Introduction to Luminescence Dating (G)

Seminar: Physical Basis of Luminescence (G)

Special topics: Advanced Instrumentation and Analysis (G)

Special topics: Environmental Dosimetry (G)

Special topics: Thermoluminescence (G)

#### **Murray State University**

##### **2010-2013**

Introductory Geomorphology (U)

Conservation and Environmental Geosciences (U)

Scientific Communication (G)

Special topics: Fluvial Processes (U/G)

Special topics: Fluvial landscape evolution (U)

## **Texas State University**

### **2002-2008**

Water Resources & Management (field and laboratory section) (U)  
World Geography (U)  
Physical Geography (U)

## **University of Arkansas**

### **1999-2001**

Environmental Geology and Hazards, Laboratory (U)  
Physical Geography Laboratory (U)  
Geosciences Tutor for the University of Arkansas Athletic Department.

## **STUDENT RESEARCH ADVISING**

### **Graduate Student Advisees**

Kathleen Rodrigues, Ph.D., Department of Geological Sciences and Engineering,  
University of Nevada Reno. 2021.  
Helen Beeson, Ph.D. Department of Geological Sciences and Engineering, University of  
Nevada Reno. 2019.  
Ryan Prusinski, M.S., Murray State University, 2013. Thesis: Spatial distribution and  
characterization of knickpoints in the in the Buffalo National River watershed,  
Arkansas.

### **Graduate Student Committees**

Erika Groh, M.S. University of Nevada Reno. Geology (expected 2021).  
Michael Stone, Ph.D. Louisiana State University. Geology (expected 2024).  
Conni DeMasi-Castillo, Ph.D. University of Nevada Reno. Geology (expected 2022).  
Anna White, M.S. University of Nevada Reno. Natural Resources. 2019.  
Emery Anderson-Meritt, M.S. UC Davis. Geology. 2018.

### **Undergraduate Student Advisees**

Rachel Pober, B.S. student, Department of Geological Sciences and Engineering,  
Department of Anthropology, University of Nevada, Reno, 2017. Senior Thesis:  
Geochronology of the Cooper's Ferry Archaeological Site.  
Hayden Brown, B.S, Dept. of Geosciences, Murray State University, 2013. Senior Thesis:  
Variation in erosion rates with different lithology and grain size.  
Kristen Reynolds, B.S., Dept. of Geosciences, Murray State University, 2012. Senior  
Thesis: Quantifying changes in late Quaternary sediment transport capacity of  
the Buffalo National River, Arkansas.

## VISITING SCIENTISTS AND STUDENTS HOSTED

Michael Stone. 2019. Dating dry valley deltas in Lake Fryxell, Antarctica. LSU, NSF.  
Abbey Marcotte. 2019. Terrace formation at Konza Refuge. NSF/EPSCOR  
Abbey Langston. 2019. Lateral valley migration using luminescence dating. NSF/EPSCOR  
Arnaud Temme. 2019. Soil landscape modeling. Institutional funding.  
Nina Atae. 2019. Dating seismic fanglomerates in Coachella Valley. Kansas Geological Survey.  
Conni De Masi. 2018-2019. Petersen Mountain fault paleoseismic slip rates. USGS/NEHERP.  
Colin Chupik. 2018-2019. Slip rates on Warm Springs Valley Fault, North Valleys, Reno, NV. USGS/NEHERP  
Emery Anderson-Meritt. 2016. Holocene slip rates at the Pearblossom Site, Mojave San Andreas EarthScope AGeS.

## PRESENTATIONS AND ABSTRACTS (\*\*Indicates advisee, \*Indicates student)

Bristow, C., Lancaster, N., Alramadan, K. A., Neudorf, C.M., **Keen-Zebert, A.** (2023). Late Pleistocene and Holocene dune accumulation in the Shaybah area, eastern Saudi Arabia. XXI INQUA Congress 2023: Rome, Italy, July 14, 2023-July 20, 2023  
Bristow, C., Lancaster, N., Alramadan, K. A., Neudorf, C.M., **Keen-Zebert, A.** (2023). Late Pleistocene and Holocene dune accumulation in the Shaybah area, eastern Saudi Arabia. . XXI INQUA 2023: Rome, Italy, July 4, 2023-July 20, 2023  
Krause, A., McKinney, E., Marshall, J., White, C. J., Hamel, J., Miller, C. N., Litchfield, N. J., Wang, N., Neudorf, C.M., **Keen-Zebert, A.** (2022). Geochronology of uplifted late Pleistocene coastal terraces, Cape Kidnappers and Riversdale Beach, Hikurangi Subduction Margin, North Island, New Zealand, GSA Connects 2022: Denver, CO, October 9, 2022-October 12, 2022  
\*\*Rodrigues, K. D., Keen-Zebert, A. K., Huot, S. (2021). Exploring the use of luminescence techniques for dating volcanic glasses. Luminescence and Electron Spin Resonance Dating (LED) 16th Annual Conference, September 13, 2021-September 17, 2021  
Stone, M.\*, Doran, P., **Keen-Zebert, A.**, Neudorf, C., Goehring, B. (2020). Historic lake level changes in lower Taylor Valley, Antarctica. 2020 McMurdo Dry Valleys LTER Meeting, July 28, 2020.  
\*\*Beeson, H.W., McCoy, S.W., Willett, S., **Keen-Zebert, A.**, 2019, December. Quantification of internal system dynamics and external forcing in bedrock river networks across tectonic provinces of North America. In *AGU Fall Meeting 2019*. AGU.  
\*Marcotte, A.L., Langston, A.L., **Keen-Zebert, A.**, 2019, December. Investigating rates and mechanisms of lateral erosion in a small bedrock river using erosion pins,

structure-from-motion photogrammetry, and luminescence dating. In *AGU Fall Meeting 2019*. AGU.

- \*\*Rodrigues, K., **Keen-Zebert, A.**, Huot, S. 2019. Investigating the potential of the red thermoluminescence (RTL) signal for dating volcanic glass. 13th New World Luminescence Dating Workshop. University of Illinois at Urbana-Champaign, Illinois.
- \*De Masi, C., Koehler, R., Dee, S., Chupik, C., Castillo, C., Kleber, E., **Keen-Zebert, A.** 2019. New Observations on the Paleoseismic History and Sense of Slip along the Peterson Mountain Fault, North Western Nevada. Geological Society of America Abstracts with Programs. Vol. 51, No. 4.
- \*\*Beeson, H.W., McCoy, S.W., Willett, S. and Keen-Zebert, A., 2019, December. Quantification of internal system dynamics and external forcing in bedrock river networks across tectonic provinces of North America. In *AGU Fall Meeting Abstracts*(Vol. 2019, pp. EP23A-01).
- \*Young, E., Scharer, K., **Keen-Zebert, A.**, \*Anderson Merritt, E., Cowgill, E., Weldon, R. 2019. New interpretations at the Ranch Center and Key Slide slip rate sites, Mojave San Andreas Fault, Palmdale, CA. Southern California Earthquake Center Annual Meeting. Palm Springs, CA.
- Keen-Zebert, A.**, DeWitt, R., Rittenour, T., Huot, S., Spencer, J., Hanson, P, Nelson, M., Neudorf, C., Collins, M., Mahan, S., Gray, H. 2019. ILUMINATES: an Integrated Luminescence Instrumentation Network for Advancement and Training in Earth Science. 13th New World Luminescence Dating Workshop. University of Illinois at Urbana-Champaign, Illinois.
- Neudorf, C., Quinn, D., **Keen-Zebert, A.**, 2019. SPARROW -an open-source laboratory information management system focused on geochronology. 13th New World Luminescence Dating Workshop. University of Illinois at Urbana-Champaign, Illinois.
- \*Heidner, N., Shepherd, S., **Keen-Zebert, A.**, 2018. Testing erosion potential of heterogeneous lithologies to understand atypical valley morphology in the Buffalo National River Watershed. Geological Society of America *Abstracts with Programs*. Vol. 50, No. 6; Indianapolis, IN.
- \*Gray, H., **Keen-Zebert, A.**, Furbish, D.J., Mahan, S., 2018. A probabilistic physical interpretation of luminescence in soils with applications to sediment tracing and soil mixing. EOS Transactions: AGU Fall Meeting Supplement, Abstract EP33A-08 v 99, Washington, D.C.
- Keen-Zebert, A.**, \*Rodrigues, K.D., Shepherd, S. 2017. (Invited) Variability in the Depositional Age of Alluvial Fill Overlying Strath Terraces: Implications for Determining River Incision Rates Using Optically Stimulated Luminescence Dating. EOS Transactions: AGU Fall Meeting Supplement, Abstract EP32C-04 v 98, New Orleans, LA.
- \*Zunka, J.P., Lancaster, S.T., **Keen-Zebert, A.**, 2017. Lithologic and Process Controls on Meander Wavelengths and Lateral Migration Rates of Rivers Meandering in

- Bedrock. EOS Transactions: AGU Fall Meeting Supplement, Abstract EP41A-1830 v 98, New Orleans, LA.
- \*Rodrigues, K.D., **Keen-Zebert, A.**, Huot, S., Adams, K. D., 2017: Testing the potential of thermoluminescence dating of volcanic glass with known-age samples. Geological Society of America Annual Meeting Abstracts with Programs, v 49. Seattle, WA. DOI: 10.1130/abs/2017AM-308037.
- \*Poher, R., Huot, S., Davis, L.G., **Keen-Zebert, A.**, Comparison of corrections for anomalous fading in potassium feldspar. Geological Society of America Abstracts with Programs. Vol. 49. Seattle, WA. DOI: 10.1130/abs/2017AM-307788
- \*McGuire, C., Schmidt, A.H., **Keen-Zebert, A.**, Collings, B.D., Guedes, J.D., Timing and provenance of loess in Jiuzhaigou, China. Geological Society of America Annual Meeting Abstracts with Programs, v 49. Seattle, WA. DOI: 10.1130/abs/2017AM-307967.
- Keen-Zebert, A.** Luminescence dating for paleoseismic research: what users need to know. Southern California Earthquake Center Annual Meeting. Palm Springs, CA.
- \*Anderson-Merritt, E., Cowgill, E., Scharer, K., **Keen-Zebert, A.**, Preliminary Paleoslip Results from the Pearblossom Site on the Mojave Section of the San Andreas Fault Southern California Earthquake Center Annual Meeting. Palm Springs, CA.
- \*\*Rodrigues, K. D., **Keen-Zebert, A.**, K., Huot, S., Adams, K. D. 2017. Testing the suitability of the TL signal for dating volcanic glass, Luminescence and Electron Spin Dating Conference (LED 2017). Cape Town, South Africa.
- \*\*Poher, R., **Keen-Zebert, A.**, Davis, L. 2017. Refinement of the chronostratigraphy and age of pit features at the Cooper's Ferry site, Idaho. Society for American Archaeology. Vancouver, British Columbia, Canada.
- Keen-Zebert, A.**, Tooth, S. 2016. Growth Rates and Stability of Tree Covered Islands on the Anabranching Vaal River, Free State South Africa, Established Using Quartz Optically Stimulated Luminescence. EOS Transactions: AGU Fall Meeting Supplement, Abstract DP53C-0979. v 97, San Francisco, CA.
- \*Larkin, Z., Ralph, T., Tooth, S., Duller, G.A.T., McCarthy, T.S., **Keen-Zebert, A.**, Humphries, M. 2016. Implications of channel avulsion for the structure and functioning of semiarid floodplain wetlands: Examples from South Africa. INTECOL International Wetlands Conference. Sept., 19-24, Changshu, China.
- \*Beeson, H., McCoy, S., **Keen-Zebert, A.** 2016. Drainage area exchange between river basins produces long-lived transient landscapes. Geological Society of America Annual Meeting Abstracts with Programs, v 48. Denver, CO. DOI: 10.1130/abs/2016AM-287955.
- Keen-Zebert, A.**, Granger, D.E., Paces, J.B., Hudson, M.R. 2016. (Invited) Combined use of cosmogenic nuclide, U-series disequilibrium, paleomagnetism, and optically stimulated luminescence within Fitton Cave to evaluate the landscape evolution of the Buffalo National River, Arkansas. Geological Society of America Annual Meeting Abstracts with Programs, v 48. Denver, CO. DOI:10.1130/abs/2016AM-287955.

- Wang, H., Curry, B.B, McKay, D.E., Berg, R.C., Stumph, A.J., Huot, S., **Keen-Zebert A.** 2016. Evidence of meltwater megafloods near the southernmost ice margins of the Laurentide Ice Sheet between 20.5 and 18.5 ka. North Central Geological Society of America Annual Meeting Abstracts with Programs. Champaign, IL.
- \*\*Beeson, H., McCoy, S., Keen-Zebert, A.** 2015. Persistent river-basin disequilibrium in a cratonic landscape: Ozark dome, USA. EOS Transactions: AGU Fall Meeting Supplement, v 96, Abstract EP41A-0911. San Francisco, CA.
- Keen-Zebert, A.** 2015. (Invited) Using OSL to investigate the impact of lithological heterogeneity on sediment preservation in fluvial systems. Abstracts of the Annual Meeting of the Association of American Geographers. Chicago, IL.
- Shepherd, S, **Keen-Zebert, A.** 2015. Heterogeneous lithology and valley width in the Buffalo River watershed, northern Arkansas. Abstracts of the Annual Meeting of the Association of American Geographers. Chicago, IL.
- Keen-Zebert, A.** 2014. Lithological controls on bedrock river incision and valley formation in the eastern South African Interior. EOS Transactions: AGU Fall Meeting Supplement, v 95, Abstract EP53A-3595. San Francisco, CA.
- Shepherd, S., **Keen-Zebert, A.** 2014. Lithologic heterogeneity and variable valley width in the Buffalo River watershed, AR. EOS Transactions: AGU Fall Meeting Supplement, v 95, Abstract EP53A-3594. San Francisco, CA.
- Bacon, S., Adams, K., Bullard, T., **Keen-Zebert, A.**, Decker, D. 2014. Sill Failure and catastrophic outburst floods from Owens Lake, California: implications for latest Pleistocene and Holocene paleohydrology of the Owens River drainage basin. Geological Society of America Annual Meeting Abstracts with Programs, v 46. Vancouver, BC.
- Keen-Zebert, A., Baker, S.** 2014. Comparison of single- and multi-grain quartz luminescence ages from terraces in the Buffalo National River, Arkansas. 14<sup>th</sup> International Luminescence and Electron Spin Dating Conference and Workshop. Montreal, CA.
- \*Hendricks, R., Rink, W.J., Mallinson, D., Alexander, C., **Keen-Zebert, A.** 2014. Timing and emplacement of ancient coastal deposits of Georgia as determined by ESR optical dating: A work in Progress Part II. 14<sup>th</sup> International Luminescence and Electron Spin Dating Conference and Workshop. Montreal, CA.
- Keen-Zebert, A., Hudson, M., and Shepherd, S.** 2014. Characterization and ages of Quaternary river terraces in the Buffalo National River, Arkansas. South-Central Geological Society of America Regional Meeting. Fayetteville, Arkansas.
- Shepherd, S., **Keen-Zebert, A., Hudson, M.** 2014 Valley width and heterogeneous lithology in the Buffalo River Watershed, Northern Arkansas. South-Central Geological Society of America Regional Meeting. Fayetteville, Arkansas.
- Keen-Zebert, A., Hudson, M., and Shepherd, S.,** 2014. Post meeting field trip: Quaternary geology and geomorphology of the Buffalo National River, Arkansas. South-Central Geological Society of America Regional Meeting. March 19, 2014 Fayetteville, Arkansas.

- Shepherd, S., **Keen-Zebert, A.**, Hudson, M., Turner, K. 2013. Variable valley width and heterogeneous lithology in the Buffalo National Scenic River, Arkansas. Geological Society of America Annual Meeting Abstracts with Programs, v 45 No. 7, P. 577. Denver, CO.
- Keen-Zebert, A.**, Mahan, S. 2012. Equivalent dose distributions demonstrate that varied fluvial transport processes are a major component in the construction of floodplains. New World Luminescence Workshop. Los Angeles, CA.
- \*Hendricks, R., Rink, W.J., Mallinson, D., Alexander, C., **Keen-Zebert, A.** 2012. Timing of the emplacement of ancient coastal deposits of Georgia as determined by ESR optical dating. New World Luminescence Workshop. Los Angeles, CA.
- Keen-Zebert, A.**, Tooth, S., Rodnight, H., Duller, G.A.T., Roberts, H., Grenfell, M. 2012. Late Quaternary floodplain reworking and the preservation of alluvial sedimentary archives in the eastern interior of South Africa. Meeting of Young Researchers in Earth Sciences V (MYRES V). The Sedimentary Record of Landscape Dynamics. Salt Lake City, UT.
- Curran, J.C., **Keen-Zebert, A.** 2012. Selective sediment transport through a gravel mantled bedrock channel. EOS Transactions: AGU Fall Meeting Supplement, v 93, Abstract EP23B-0813. San Francisco, CA.
- \*Prusinski, M.R., **Keen-Zebert, A.**, \*Reynolds, K. 2012. Identifying the spatial distribution of knickpoints in the Buffalo National River watershed, northern Arkansas. Abstracts of the Annual Meeting of the Association of American Geographers, New York, NY.
- \*Prusinski, M.R., **Keen-Zebert, A.** 2011. A GIS approach to identifying the spatial distribution of knickpoints in the Buffalo National River watershed, northern Arkansas. Presented at the Kentucky Academy of Sciences Annual Meeting. (Awarded first place in geology student paper competition.)
- Keen-Zebert, A.**, Shepherd, S., Hudson, M., Turner, K. 2011. Characterization of Quaternary alluvial terraces in the Buffalo National River valley, Arkansas. Geological Society of America Annual Meeting Abstracts with Programs, v 43, Abstract 96-13. Minneapolis, MN.
- Keen-Zebert, A.**, Tooth, S., Stuart, F. 2011. Cosmogenic  $^3\text{He}$  erosion rates suggest that river incision and landscape evolution in the eastern interior of South Africa are weathering limited. EOS Transactions: AGU Fall Meeting Supplement, v 92, Abstract EP43C-0712. San Francisco, CA.
- Keen-Zebert, A.**, Tooth, S., Stuart, F. 2010. Using cosmogenic  $^3\text{He}$  to quantify bedrock channel erosion rates on the Mooi River, South Africa. EOS Transactions: AGU Fall Meeting Supplement, v 91, Abstract EP41C-0713. San Francisco, CA.
- Keen-Zebert, A.**, Tooth S. 2010. What is the historical rate of variation of floodplain wetlands in the South African Highveld? Geological Society of America Annual Meeting Abstracts with Programs, v 42, Abstract 171-9. Denver, CO.
- Keen-Zebert, A.**, Tooth, S. 2010. How do floodplain ages compare in adjacent alluvial and bedrock reaches in the South African Highveld? Geological Society of

- America Annual Meeting Abstracts with Programs, v 42, Abstract 99-8. Denver, CO.
- Keen-Zebert, A.,** Tooth, S., Duller, G.A.T. 2010. Using OSL to determine rates of floodplain reworking in the South African Highveld. Presented at the New World Luminescence Workshop, Montreal, Canada.
- Keen-Zebert, A.,** Tooth, S. 2010. Contrasting bedrock channel morphology on three rivers in the South African Highveld. Geophysical Research Abstracts, v 12, Abstract EGU2010-861-2. European Geosciences Union General Assembly. Vienna, Austria.
- Tooth, S., McCarthy, T.S., Rodnight, H., **Keen-Zebert A.,** Rowberry, M.D., Brandt, D. 2010. Geomorphological dynamics of South African floodplain wetlands and the implications for management planning. Abstracts of the Annual Meeting of the Association of American Geographers. Washington, D.C.
- Tooth, S., McCarthy, T., Rodnight, H., **Keen-Zebert, A.,** Rowberry, M., Brandt, D. Geomorphological dynamics of southern African floodplain wetlands: implications for land degradation assessment and management planning. South African Association of Geomorphologists Biennial Conference.
- Keen-Zebert, A.,** Tooth, S. 2009. Bedrock channel incision controls Quaternary wetland development cycles on the South African Highveld. International Conference on Geomorphology (ANZIAG). Melbourne, Australia.
- Tooth, S., McCarthy, TS., Rodnight, H., **Keen-Zebert, A.,** Rowberry, M.D., Brandt, D. 2009. Morphological and sedimentary dynamics of a South African floodplain wetland: from channelled to unchannelled and back to channelled? International Conference on Fluvial Sedimentology. Tucuman, Argentina.
- Keen-Zebert, A.** 2007. Mixed alluvial bedrock rivers, an example from central Texas. Geography in the Americas. La Serena, Chile.
- Keen-Zebert, A.,** Curran, J.C. 2007. Channel boundary forcing in the Guadalupe River, a mixed alluvial-bedrock river. Abstracts of the Annual Meeting of the Association of American Geographers. San Francisco, CA.
- Keen-Zebert, A.,** Curran, J.C. 2006. Convex bar formation in an alluvial-bedrock stream channel. EOS Transactions: AGU Fall Meeting Supplement, v 87, Abstract H51G-0580. San Francisco, CA.
- Keen-Zebert, A.,** Curran, J.C. 2006. Bar spacing in alluvial and bedrock reaches of the Guadalupe River, a mixed morphology or hybrid river in central Texas. Geological Society of America Abstracts with Programs, v 38, Abstract 22-4. Philadelphia, PA.
- Keen-Zebert, A.,** Curran J.C. 2006. Alluvial-bedrock channel boundary forcing and human built forcing agents in the Guadalupe River. Presented at the Binghamton Geomorphology Symposium. Columbia, SC.
- Keen-Zebert, A.,** Curran, J.C. 2006. Spatial variation of channel reach type and gravel deposition in the Guadalupe River in central Texas. Abstracts of the Annual Meeting of the Association of American Geographers, Chicago, IL.



- Keen-Zebert, A.,** Curran, J.C. 2005. Spatial and temporal variation of sediment transport capacity and channel reach type in two mixed alluvial-bedrock rivers in central Texas. Presented at Gravel Bed Rivers VI International Conference and Workshop. Lienz, Austria.
- Keen-Zebert, A.,** Curran, J.C. 2005. The spatial distribution of sediment in two mixed alluvial bedrock rivers in central Texas. Abstracts of the Annual Meeting of the Association of American Geographers. Denver, CO.
- Keen-Zebert, A.,** Curran, J.C. 2004. Determining the grain size distribution and volume of sediment accumulation behind dams in bedrock channels. Abstracts of the Annual Meeting of the Association of American Geographers. Philadelphia, PA.
- Keen-Zebert, A.** 2003. Stream channel response to precipitation in an urban catchment: Scull and Mud Creeks in Fayetteville, Arkansas. Abstracts of the Annual Meeting of the Association of American Geographers. New Orleans, LA.

### **UNPUBLISHED REPORTS**

- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from Denison Dam (10/31/2022). 22 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from Socorro Area, New Mexico (09/26/2022). 18 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from White River (09/22/2022). 22 pp
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from White River (08/03/2022). 22 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from Feather River (Oroville Dam). 21 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from White River (Bull Shoals Dam). 22 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from Kootenai River (Libby Dam). 11 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment from Red River (Denison Dam). 10 pp.
- Neudorf, C., **Keen-Zebert, A.** (2022). Luminescence dating of sediment for the Sierra Nevada/White-Inyo Mountains Project. 17 pp
- Neudorf, C., **Keen-Zebert, A.** (2021). Luminescence dating of sediment for the San Marcial Project, New Mexico. 15 pp.
- Neudorf, C., **Keen-Zebert, A.** (2021). Luminescence dating of sediment from Socorro, New Mexico (Lander Project). 25 pp.
- Neudorf, C., **Keen-Zebert, A.** (2021). Luminescence dating of sediment from Christmas Hills, Tasmania, Australia. 21 pp.
- Neudorf, C., **Keen-Zebert, A.** 2020. Luminescence dating of sediment from New Jersey Pine Barrens Dunes. 20 pp.

- Neudorf, C., **Keen-Zebert, A.**, (2020). Luminescence dating of sediment from North Tibet. DRI Project Report (samples RF001 and RF002). 14 pp.
- Neudorf, C., **Keen-Zebert, A.**, 2020. Luminescence dating of sediment for the Grass Valley Paleo Project (sample Iny-49-2-2). 14 pp.
- Neudorf, C., **Keen-Zebert, A.**, 2020. Luminescence dating of sediment from Hawksy Walksy. DRI Project Report 8 (samples HWV003-006). 16 pp.
- Neudorf, C., **Keen-Zebert, A.**, 2020. Luminescence dating of sediment from Greers Ferry Lake. DRI Project Report (samples GFL001-008). 20 pp.
- Neudorf, C., **Keen-Zebert, A.**, 2020. Luminescence dating of sediment from Pee Dee Quarry. DRI Project Report (samples PDQ001-004). 16 pp.
- Neudorf, C., **Keen-Zebert, A.**, (2020). Luminescence dating of sediment from Rub Al Khali. DRI Project Report (samples RAK008, RAK014-016). 16 pp.
- Neudorf, C., **Keen-Zebert, A.**, 2020. Luminescence dating of sediment from Snake River (Idaho Power Project). DRI Project Report (samples IDP005-010). 18 pp.
- Neudorf, C., **Keen-Zebert, A.**, 2020. Luminescence dating of sediment from China Lake. DRI Project Report (samples NAWSCL-N & S). 14 pp.
- Neudorf, C., **Keen-Zebert, A.** 2019. Luminescence dating of sediment from Rub Al Khali, Nick Lancaster, DRI.
- Neudorf, C., **Keen-Zebert, A.** 2019. Luminescence dating of sediment for the LCAI Desert Dust Projects, Distal Orb, and Grass Valley Projects. Craig Young, Far Western Anthropological Research Group.
- Keen-Zebert, A.** 2018. Bracketing slip rates on the Mojave San Andreas using feldspar IRSL luminescence dating. Eric Cowgill, UC Davis.
- Keen-Zebert, A.** 2017. Geochronology of late Pleistocene sediment transport on moraine hillslopes. Dan Morgan, Vanderbilt University.
- Keen-Zebert, A.**, 2017. Migration rate of Green Point and Elberta Dune Complexes in northern MI. Bradley Johnson, Davidson College.
- Keen-Zebert, A.** 2016. Defining the geochronology of the Jiuzhaigou terraces, China. Amanda Schmidt, Oberlin College.
- Keen-Zebert, A.**, Baker, S. 2015. Luminescence dating of sediment from sand dunes at Antioch Dunes National Wildlife Reserve. Alison McNally, California State University, Stanislaus.
- Keen-Zebert, A.**, Baker, S. 2015. Luminescence dating of sediment from beach deposits of the Pleistocene highstand of Owens Lake. Steve Bacon & Ken Adams, Desert Research Institute.
- Keen-Zebert, A.**, Baker, S. 2015. Luminescence dating results: Trench 2, Anderson Dam, Morgan Hill, CA. Chris Bloszies, Lettis Consultants International.
- Keen-Zebert, A.**, Baker, S. 2015. Luminescence dating of sediment from the City of San Francisco's southeast water pollution control plant building 521 replacement project. Phil Kaijankoski. Far Western Anthropological Research Group, Inc.
- Keen-Zebert, A.**, Hudson, M., Shepherd, S. 2014. Field Trip Guide: Post meeting field trip, Quaternary geology and geomorphology of the Buffalo National River, Arkansas.

South-Central Geological Society of America Regional Meeting. March 19, 2014  
Fayetteville, Arkansas.

**Keen-Zebert, A.** 2014. Luminescence dating of sediment from sand dunes at the San Francisco Peninsula, California. Far Western Anthropological Research Group, Inc.

### **INVITED SEMINARS AND COLLOQUIA**

April 5, 2019. Louisiana State University. Geology Department  
February 22, 2019. University of Nevada, Reno, Dept. of Anthropology  
Oct. 6, 2016. Oberlin College, Department of Geology  
Sept. 9, 2016. University of Arkansas, Department of Geosciences  
June 4, 2015. Oregon State University, Department of Geology  
June 5, 2015. University of Oregon, Department of Geography  
Sept., 24, 2014. University of Nevada, Reno, Dept. of Geological Sci & Engineering  
March 4, 2013. Auburn University, Dept. of Geology and Geography  
April 3, 2012. University of Texas at Austin, Jackson School of Geosciences  
March 30, 2012. Vanderbilt University, Department of Earth and Env't. Sciences  
January 23, 2012. University of Missouri, Department of Geography  
April 19, 2011. University of Louisville, Department of Geosciences  
January 18, 2010. University of Cincinnati, Department of Geology

### **PROFESSIONAL AFFILIATIONS**

Geological Society of America  
Quaternary Geology and Geomorphology Division  
Sedimentary Geology Division  
American Geophysical Union  
Earth & Planetary Surface Processes Section  
Association of American Geographers  
Geomorphology Specialty Group  
American Quaternary Association  
Association for Women Geoscientists  
National Association of Black Geoscientists

### **SERVICE**

#### **Proposal Reviews**

NSF Sedimentary Geology and Paleobiology (Panel)  
NSF Frontiers in Earth Sciences (Panel)  
NSF Geomorphology and Land Use Dynamics (Panel)  
NSF Major Research Instrumentation  
NSF Hydrologic Sciences

NSF Antarctic Earth Sciences  
NSF Integrated Earth Sciences  
Army Research Office  
National Geographic Committee for Research and Exploration  
Deutsch Forschungsgemeinschaft (DFG)

**Manuscripts Reviews for Peer-Reviewed Journals**

*Journal of Geophysical Research - Earth Surface*  
*GSA Bulletin*  
*Geomorphology*  
*Sedimentary Geology*  
*Journal of African Earth Sciences*  
*Journal of Archaeological Sciences*  
*Quaternary International*  
*Quaternary Research*  
*Elements*  
*Quaternary Science Reviews*  
*Earth Surface Processes and Landforms*  
*Quaternary Research*

**Other service**

American Quaternary Association Councilor for Geochronology and Geochemistry 2018-2022  
Panel member 2015-2018, GSA Quaternary Geology and Geomorphology Division  
Session convener at GSA 2017: T197. No Dates: No Rates -- Utilizing geochronometers to quantify rates of geomorphic processes or archaeological development over a wide range of temporal and spatial scales.  
Association for Women Geoscientists Distinguished Lecturer (2015-present)  
Association for Women Geoscientists volunteer reviewer of student C.V.s and resumes  
Session convener at SCGSA 2014: Quaternary Geology and Geomorphology  
Field trip leader at SCGSA 2014: Quat Geol and Geomorphology of the Buffalo Natl. River  
National Science Foundation Geomorphology and Land Use Dynamics Panel (2)  
Session convener at AGU 2012: EP23B. Beyond Grain Size: Controls on Sediment Transport  
Reviewer for Geological Society of America, Quaternary Geology and Geomorphology Division student proposals for the Mackin, Howard, and Morisawa awards  
Judge for American Geophysical Union Earth and Planetary Surface Processes student awards  
Mentor to undergraduate, graduate, and post-doc women in Geosciences through MentorNet

### **DRI Internal Service and Service to Nevada System of Higher Education**

NSHE Chancellor Search Committee (2020)

DRI Faculty Senate Chair (2020)

DRI Faculty Senate Vice Chair (2019)

DRI Faculty Senate Member (2018-2021)

DRI IT CTIO Search Committee (2019)

DRI Digital Engagement Administrator Search Committee (2019)

DRI Vice President for Information Technology (2019)

DRI Vice President for Research Search Committee (2017)

University of Nevada, Reno Department of Geological Sciences Graduate Committee (2013)

University of Nevada, Reno Graduate Program in Environmental Science Committee (2015-)

University of Nevada, Reno Graduate Program in Hydrological Sciences Committee (2015-)

### **CONTINUING EDUCATION & WORKSHOPS**

- 2017** American Management Association: Finance for the Non-Financial Manager.  
American Management Association: Project Team Leadership: Building Commitment Through Superior Communication.
- 2016** American Management Association: Preparing for Leadership: What it takes to Lead.  
Leadership Communication for Maximum Impact: Storytelling  
High Performance Collaboration: Leadership, Teamwork, and Negotiation  
UNAVCO: High Resolution Topography.
- 2014** Canberra Industries: Fundamentals of Gamma Spectroscopy.
- 2012** Meeting of Young Researchers in Earth Science V (MYRES V). The Sedimentary Record of Landscape Dynamics. Salt Lake City, UT.
- 2011** National Science Foundation Cutting Edge Early Career Geoscience Faculty Workshop.  
Geologic Applications of Cosmogenic Nuclides: Advances from the CRONUS Earth Project, GSA Short Course, 0.8 CEU credits.
- 2010** U-Pb Geochronology & Hf Isotope Geochemistry GSA Short Course, 0.8 CEU credits.
- 2009** Geochronology Summer School, University of Zurich, 2 ECTS Credit Points.
- 2008** Aberystwyth University Workshop: Large Group Teaching, 7 hours.