TEXAS STATE VITA

I. Academic/Professional Background

A. Name and Title

Name: Dr. Samantha M. Krause Title: Associate Professor

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PHD	2018	University of Texas at Austin	Geography	Wetland Agroecoystems in the Maya Lowlands of Belize: LiDAR and Multi-Proxy Environmental Change
MS	2009	Florida State University	Geographic Information Science	
BS	2007	University of Mary Washington	Anthropology and Geology	

C. University Experience

Position	*University*	*Comments*	*Dates*
Assistant Professor	Texas State University		August 2020 - Present
Lecturer	Texas State University		August 2019 - May 2020
Lecturer	University of Texas at Austin		August 2018 - August 2019
Lecturer	New Mexico State University-Alamogordo		August 2012 - August 2014

D. Relevant Professional Experience

Position	*Entity*	*Comments*	*Dates*

GIS Analyst	DMG Four Corners Research, Alamogordo, NM, United States	September 2009 - August 2014

II. TEACHING

A. Teaching Honors and Awards:

Award / Honor Nominee: Nominee for the Presidential Awards for Excellence: Teaching Award at the Assistant Professor level, Texas State University.
February 2023 - July 2023

Award / Honor Recipient: Teaching Award of Honor for Spring 2020, Texas State University Alumni Association.
2020

B. Courses Taught:

Texas State University:

GEO 1305 - METEOROLOGY

GEO 3305 - CLIMATOLOGY

GEO 3425 - GEOMORPHOLOGY

GEO 4313 - ENVIRONMENTAL MANAGEMENT

GEO 4325 - FLUVIAL PROCESSES

GEO 4430 - FIELD METHODS

GEO 5190 - INDEPENDENT STUDY

GEO 5199B - THESIS

GEO 5299B - THESIS

GEO 5316 - APPLD PHYSCL GEO

GEO 5335 - DIRECTED RESEARCH

GEO 5390 - INDEPENDENT STUDY

GEO 5395 - PROBLEMS IN APPLIED GEOGRAPHY

GEO 5399A - THESIS

GEO 5399B - THESIS

GEO 5430 - FIELD METHODS

GEO 5599B - THESIS

GEO 7199A - DISSERTATION

GEO 7199C - DISSERTATION

GEO 7299A - DISSERTATION

GEO 7390 - INDEPENDENT STUDY

GEO 7393J - SOIL AND SOCIETY

GEO 7399C - DISSERTATION

GEO 7430 - FIELD METHODS

GEO 7699A - DISSERTATION

GEO 7999A - DISSERTATION

GEO 7999C - DISSERTATION

New Mexico State University: Alamogordo:

GEO 111 - Physical Geology

GEO 212 - Historical Geology

The University of Texas at Austin:

GEO 404E - Environmental Science: A Changing World.

University of Texas at Austin:

GRG 330W - Water and Watersheds

GRG 333K - Climate Change

GRG 339 - Geomorphology

GRG 401C - The Natural Environment

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

Supervisor / Chair, Dissertation, "From Charcoal to Satellites: Reconstructing fire regimes across the Holocene using multiproxy research", Status: In Progress. (August 2025 - Present).
Student(s): Amanda Barney, Doctoral, PhD.

Supervisor / Chair, Master's Thesis, "Adaptive infrastructure across time: irrigation systems in the arid landscape of New Mexico", Status: In Progress. (January 2025 - Present). Geography and Environmental Studies, Texas State University.
Student(s): Mason Miller, Graduate, MS.

Supervisor / Chair, Master's Thesis, "A Geoarchaeological Investigation of Agriculture in the Mesilla-phase Creekside Village Site in Southern New Mexico", Status: In Progress. (August 2024 - Present). Geography and Environmental Studies, Texas State University.
Student(s): Tristian Geodert, Graduate, MS.

Member, Dissertation, "From Playas to Plateaus: A geoarchaeological multi-proxy study of the Chupadera Arroyo uplands in Torrance and Socorro Counties, New Mexico – demonstrating the accessibility of paleoenvironmental and geoarchaeological data in high-energy fluvial transport zones", Status: In Progress. (August 2023 - Present). Anthropology, Texas State University.
Student(s): Gwen Olivier, Doctoral, PhD.

Supervisor / Chair, Master's Thesis, "Examining Human-Environment Interactions in the Southeastern United States: A Case Study of Kisatchie National Forest", Status: In Progress. (August 2023 - Present). Geography and Environmental Studies, Texas State University.
Student(s): Taraja Oliver.

Member, Dissertation, "Critical Zone Endangerment and the role of Plantation Agriculture", Status: In Progress. (2023 - Present). Geosciences, Baylor University.
Student(s): Jordan Chapman, Doctoral, PhD.

Supervisor / Chair, Dissertation, "Late Quaternary Hydroclimate and Human Habitation in New Mexico, USA", Status: In Progress. (August 2022 - Present). Department of Geography and Environmental Studies, Texas State University.

Student(s): Marie White, Doctoral, PhD.

Supervisor / Chair, Dissertation, "Resurveying the Faynan: Using GIS and remote sensing to monitor contemporary threats to an ancient landscape", Status: In Progress. (August 2021 - Present). Geography, Texas State University.
Student(s): Michael Boyles, Doctoral, PhD.

Member, Dissertation, "From Keel to Keel: How Birds Are Interacting and Altering the Landscapes of Emergent Shipwrecks", Status: In Progress. (August 2020 - Present). Department of Geography and Environmental Studies, Texas State University.
Student(s): Aidan McLendon, Doctoral, PhD.

Supervisor / Chair, Master's Thesis, "Local Environmental Responses to Regional Climatic Changes During the Holocene: A Case Study from Palmetto State Park, Texas", Status: Completed. (August 2023 - August 2025). Geography and Environmental Studies, Texas State University.
Student(s): Amanda Barney, Graduate, MS.

Member, Applied Research Project, "An Assessment of How Recent Drought Conditions of the Guadalupe River Impacts Endangered Freshwater Mussels", Status: Completed. (January 2024 - May 2025). Geography and Environmental Studies, Texas State University.
Student(s): Gabrielle Goolsby, Graduate, M.A.Geo.

Member, Master's Thesis, "Using Tree Age to Understand Historical Logging Practices and Topographic Restrictions in the Lincoln National Forest, New Mexico", Status: Completed. (July 2024). Texas State University.
Student(s): Cameron Huch, Graduate, MS.

Member, Master's Thesis, "Reconstructing Lunar Topography: Comparing Photogrammetry and Laser Altimetry", Status: Completed. (May 2024). Texas State University.
Student(s): Kendahl Hejl, Graduate, MS.

Member, Dissertation, "Crafting water stewardship: Texas craft breweries as water advocates – a participatory action research project", Status: Completed. (2021 - December 2023). Geography, Texas State University.
Student(s): Delorean Wiley, Doctoral.

Supervisor / Chair, Master's Thesis, "Predicting environmental suitability for black mangroves using species distribution modeling", Status: Completed. (2021 - August 2023). Geography, Texas State University.
Student(s): Emilee Freeman, Graduate.

Supervisor / Chair, Applied Research Project, "Understanding Green Stormwater Infrastructure Impacts on the Water Quality of the Barton Creek Watershed in Austin, Texas", Status: Completed. (August 2021 - May 2023). Department of Geography and Environmental Studies, Texas State University.
Student(s): Callie High, Graduate, MaGEO.

Member, Master's Thesis, "Golden-cheeked Warbler Breeding Habitat: Assessing A Decade of Change (2010-2021)", Status: Completed. (2020 - September 2022). Geography, Texas State University.
Student(s): Kevin Colgan, Graduate.

Member, Master's Thesis, "Reconstructing Glacial Retreat Using Tree Rings and Remote Sensing in the Tien Shan Mountains, China", Status: Completed. (2021 - August 2022). Geography, Texas State University.
Student(s): Elizabeth Schumann, Graduate.

Supervisor / Chair, Master's Thesis, "A paleoecological exploration of soils in the Rio Grande watershed of Northern New Mexico", Status: Completed. (November 1, 2020 - August 2022). Geography, Texas State University.
Student(s): Rikki Weaver Lewis, Graduate, Geography - Master of Science.

Supervisor / Chair, Applied Research Project, "Performing a Supervised Land Use Land Cover Change Analysis to Quantify Urban Expansion in the Katy Prairie in Harris County, Texas", Status: Completed. (August 2020 - August 2022). Geography, Texas State University.
Student(s): John Moore, Graduate, MaGEO.

Member, Master's Thesis, "Change detection of Tamarix spp. in the Upper Brazos River corridor using object-based image analysis", Status: Completed. (2020 - July 2022). Department of Geography and Environmental Studies, Texas State University.
Student(s): Tighearnan Juarez Murphy, Graduate, MS.

D. Courses Prepared and Curriculum Development:

Environmental Management, First Time Course Preparation. Taught: August 2019 - December 2019.

Field Methods, First Time Course Preparation, Texas State University. Taught: August 2019 - December 2019.

Meteorology, First Time Course Preparation, Texas State University. Taught: August 2019 - December 2019.

GEO 5316/7393J: Soils and Society, Revise Existing Course, Texas State University: January 2024 - 2024.

Additional Comments: Redesigned course content, readings, and find projects for students.

GEO 3425 Geomorphology, Revise Existing Course, Texas State University. Taught: August 2024 - December 2024.

Additional Comments: Revised GEO 3425, including building on/developing new lab exercises.

GEO 4325 Fluvial Processes, Revise Existing Course, Texas State University. Taught: January 2023 - May 2023.

Field Methods, Revise Existing Course, Texas State University. Taught: August 2019 - December 2019.

F. Other:

Field Trip, GEO 3425: Geomorphology class field trip to Enchanted Rock State Park. 20. (November 9, 2024).

Guest Lecture, Guest Lecture for SUST 5301 Graduate Seminar: “Using geoarchaeology to reconstruct ancient sustainable practices". (October 23, 2024).

Guest Lecture, Guest Lecture: GEO 5316/7393 Global Climate Change seminar. (September 11, 2024).

Guest Lecture, Physics, Astronomy & Geosciences Spring 2024 Seminar Series: Towson University, Towson University. Towson, MA, United States. 40. (February 9, 2024).

Guest Lecture, Long Term Climate Change and History: Seminar Guest Lecture, Department of Geography and the Environment, University of Texas at Austin. 15. (September 14, 2023).

Guest Lecture, Colloquium Series, Oklahoma State Geography Department. (March 22, 2021).

Guest Lecture, Louisiana State University Department of Geography & Anthropology Colloquium Series, LSU Department of Geography & Anthropology. (March 9, 2021).

Guest Lecture, Guest Lecture/Field Trip for Fall 2020 Field Methods class. (November 6, 2020).

Additional Comments: Guest Lecture/Field Trip for Fall 2020 Field Methods class

Student Accomplishments:

Award:

Supervisor, Texas Leadership Scholars Program. "From Charcoal to Satellites: Reconstructing fire regimes across the Holocene using multiproxy research." Status: In Progress. (August 2025). Geography and Environmental Studies, Texas State University.
Student(s): Amanda Barney, Doctoral, PhD.

Additional Comments: This program is a premier initiative that grants selected high achieving doctoral students a scholarship to attend a Texas public research university. It is designed to offer financial support, peer networks, mentoring, and other opportunities to unleash the recipient’s full potential.

Supervisor, CAMINOS For Success Fellowship. "Local Environmental Responses to Regional Climatic Changes During the Holocene: A Case Study From Palmetto State Park, Texas." Status: Completed. (2024). Geography and Environmental Studies, Texas State University.
Student(s): Amanda Barney, Graduate, MS.

Additional Comments: Amanda recently received the CAMINOS For Success Fellowship. Through this, she will attend the AAHHE (American Association of Hispanics in Higher Education) Conference in Denver, Colorado during the spring 2025 semester.

Fellowship:

Supervisor, Texas State Dissertation Completion Fellowship. "Resurveying the Faynan: Using GIS and remote sensing to monitor contemporary threats to an ancient landscape." Status: In Progress. (April 29, 2025). Geography and Environmental Studies, Texas State University.
Student(s): Michael Boyles, Doctoral, PhD.

Grant:

Supervisor, GSA Graduate Student Research Grant. "A Geoarchaeological Investigation of Agriculture in the Mesilla-phase Creekside Village Site in Southern New Mexico." Status: In Progress. (June 15, 2025).

Student(s): Tristan Goedert, Graduate, MS.

G. Teaching Professional Development Activities Attended

online instruction training through Texas State, "Teaching Online @ TxState professional development course.," Texas State University. (2020).

Additional Comments: Course meets SACSCOC requirements for online instructors.

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

d. Chapters in Books:

Refereed:

Rosen, A. M., Damick, A., & Krause, S. M. (2026). Heritage of Fire in the American Southwest: Ancient Landscape Management, Traditional Ecological Knowledge, and Contemporary Challenges. In *Resilience and sustainability: past trajectories, contemporary directions, policy relevance*.

Non-refereed:

Beach, T., Luzzadder-Beach, S., Dunning, N., & Krause, S. M. (2020). Paleoecology, Soil, and Water in Maya History. In *The Maya World.* (1st Edition, pp. 229–249). Routledge.
The Maya World Chapter 13-1.pdf

2. Articles:

a. Refereed Journal Articles:

Beach, T., Luzzadder Beach, S., Krause, S. M., Thompson, A., Ploetz, C., & Houk, B. A. (2026). Geoarchaeology and Agroecosystems of the Booth River Depression. *Latin American Antiquity*. Published.

Sanchez Morales, L., Krause, S. M., Beach, T., Luzzadder-Beach, S., Cook, D., Smith, B., … Guderjan, T. (2026). A Village in the Swamp: Maya Postclassic

Persistence in the Birds of Paradise Wetland Fields. *Proceedings of the National Academy of Sciences*. Published.

Brouwer Burg, M., Harrison-Buck, E., & Krause, S. M. (2025). Sustainable legacies of the Preceramic Archaic Maya: Resiliency strategies for environmental and climatic change. *Research Reports in Belizean Archaeology*, *19*, 25–35.
Brouwer Burg et al 2025-1.pdf

Harrison-Buck, E., Krause, S. M., Brouwer Burg, M., Willis, M., Perrotti, A., & Bailey, K. (2024). Large-Scale Pre-Columbian Fisheries in the Wetlands of the Eastern Maya Lowlands. *Science Advances*. Published.
sciadv.adq1444 (2)-1.pdf

Carter, N. P., Krause, S., & Lozano, J. (2024). Striking Distance: Investigating the Epigraphy and Geography of a Late Classic Maya War. *Ancient Mesoamerica*, (35), 304–318.
Carter et al 2023-1.pdf

Brouwer Burg, M., Harrison-Buck, E., & Krause, S. M. (2023). Raising the "BAAR" through improved method and theory: Reinvigorating regional research on Archaic occupation in Northern. *Research Reports in Belizean Archaeology*, *18*. Published.
CH 23_Brouwer Burg Buck and Krause (1)-1.pdf

Garrison, T., Thompson, A., Krause, S. M., Eshleman, S., Fernandez-Diaz, J. C., Baldwin, D., & Cambranes, R. (2022). Assessing the lidar revolution in the Maya lowlands: A geographic approach to understanding feature classification accuracy. *Progress Is Physical Geography*, (Special Issue on Maya Region).
Garrison et al. 2022-1.pdf

Bhattacharya, T., Krause, S. M., Penny, D., & Wahl, D. (2022). Progress Report: Drought and Water Management in Maya Society. *Progress in Physical Geography*. Published.
Bhattacharya et al 2022-1.pdf

Damick, A., Krause, S. M., & Rosen, A. (2022). Building resilient landscapes in a semi-arid watershed: Anthropogenic and natural burning histories in Late Holocene Tesuque Creek, northern New Mexico. *Holocene*. Published.
Damick et al 2022-1.pdf

Li, Y., Krause, S., McLendon, A., & Jo, I. (2022). Teaching a geography field methods course amid the COVID-19 pandemic: reflections and lessons learned. *Journal of Geography in Higher Education*. Published. https://doi.org/10.1080/03098265.2022.2041571
17. Li et al. 2022_JGHE-1.pdf

Krause, S. M., Beach, T., Luzzadder-Beach, S., Cook, D., Bozarth, S., Valdez, F., & Guderjan, T. (2021). Tropical wetland persistence through the Anthropocene: Multiproxy reconstruction of environmental change in a Maya agroecosystem. *Anthropocene*, *34*. Published. https://doi.org/http://dx.doi.org/10.1016/j.ancene.2021.100284
Krause et al Anthropocene 2021-1.pdf

Guderjan, T., Kwoka, J., Hanratty, C., Beach, T., Luzzadder-Beach, S., Krause, S. M., … Doyle, C. (2020). Early Onset Anthropocene: Control of the Landscape by the Ancient Maya in Northwestern Belize. *Research Reports in Belizean Archaeology*, *17*. Published.
Ch 9 Guderjan et al (1)-1.pdf

Sekhon, N., Beach, T., Krause, S. M., & Eshleman, S. (2020). Understanding climate trends in Central America through practical problem-based learning. *Journal of Geography in Higher Education*. Published. https://doi.org/10.1080/03098265.2020.1833318
Sekhonetal2020-1.pdf

Beach, T., Luzzadder-Beach, S., Krause, S. M., Guderjan, T., Valdez, Fred, Jr., Fernandez-Diaz, J. C., … Doyle, C. (2019). Ancient Maya wetland fields revealed under tropical forest canopy from laser scanning and multiproxy evidence. *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*, *116*(43), 21469–21477. https://doi.org/10.1073/pnas.1910553116
Beach et al 2019 PNAS-1.pdf

Krause, S. M., Beach, T., Luzzadder-Beach, S., Guderjan, T. H., Valdez, Fred, Jr., Eshleman, S., … Bozarth, S. R. (2019). Ancient Maya wetland management in two watersheds in Belize: Soils, water, and paleoenvironmental change. *Quaternary International*, *502*, 280–295. https://doi.org/10.1016/j.quaint.2018.10.029
Krause2019QI-1.pdf

Krause, S. M., Beach, T., Luzzadder-Beach, S., Cook, D., Islebe, G., Palacios-Fest, M. R., … Guderjan, T. H. (2019). Wetland geomorphology and paleoecology near Akab Muclil, Rio Bravo floodplain of the Belize coastal plain. *GEOMORPHOLOGY*, *331*, 146–159. https://doi.org/10.1016/j.geomorph.2018.10.015
Krause et al 2019 Geomorphology-1.pdf

Beach, T., Ulmer, A., Cook, D., Brennan, M. L., Luzzadder-Beach, S., Doyle, C., … Terry, R. (2018). Geoarchaeology and tropical forest soil catenas of northwestern Belize. *QUATERNARY INTERNATIONAL*, *463*, 198–217. https://doi.org/10.1016/j.quaint.2017.02.031
Beach et al 2018 QI-1.pdf

Beach, T., Luzzadder-Beach, S., Cook, D., Krause, S. M., Doyle, C., Eshleman, S., … Ward, S. (2018). Stability and instability on Maya Lowlands tropical

hillslope soils. *GEOMORPHOLOGY*, *305*, 185–208. https://doi.org/10.1016/j.geomorph.2017.07.027
Beach et al 2018 Geomorphology-1.pdf

Luzzadder-Beach, S., Beach, T., Garrison, T., Houston, S., Doyle, J., Roman, E., … Flood, J. (2017). Paleoecology and Geoarchaeology at El Palmar and the El Zotz Region, Guatemala. *GEOARCHAEOLOGY-AN INTERNATIONAL JOURNAL*, *32*(1), 90–106. https://doi.org/10.1002/gea.21587
Paleoecology and Geoarchaeology at El Palmar and the El Zotz Region Guatemala-1.pdf

Luzzadder-Beach, S., Beach, T., Hutson, S., & Krause, S. M. (2016). Sky-earth, lake-sea: climate and water in Maya history and landscape. *ANTIQUITY*, *90*(350), 426–442.

Beach, T., Luzzadder-Beach, S., Krause, S. M., Walling, S., Dunning, N., Flood, J., … Valdez, F. (2015). “Mayacene” floodplain and wetland formation in the Rio Bravo Watershed of northwestern Belize. *HOLOCENE*, *25*(10), 1612–1626. https://doi.org/10.1177/0959683615591713

Beach, T., Luzzadder-Beach, S., Cook, D., Dunning, N., Kennett, D. J., Krause, S. M., … Valdez, F. (2015). Ancient Maya impacts on the Earth’s surface: An Early Anthropocene analog? *QUATERNARY SCIENCE REVIEWS*, *124*, 1–30. https://doi.org/10.1016/j.quascirev.2015.05.028

Beach, T., Luzzadder-Beach, S., Guderjan, T., & Krause, S. M. (2015). The floating gardens of Chan Cahal: Soils, water, and human interactions. *CATENA*, *132*, 151–164. https://doi.org/10.1016/j.catena.2014.12.017

3. Conference Proceedings:

b. Non-refereed:

Krause, S. M., White, M., Brouwer Burg, M., & Harrison-Buck, E. (2024). Revisiting the Hydrology of Chau Hiix: new geoarchaeological investigations focused on prehistoric water management around this Maya site in Belize. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2024am-403398 https://doi.org/10.1130/abs/2024am-403398

Sandweiss, D., Krause, S. M., & Luchsinger, H. (2024). The history and role of Geoarchaeology in the archaeological sciences: lessons learned and future goals in curriculum development. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2024am-403600 https://doi.org/10.1130/abs/2024am-403600

Beach, T., Luzzadder-Beach, S., & Krause, S. M. (2023). 2022 Kirk Bryan Award: The Eklu'um Paleosol, Groundwater, and Climate: Multiproxy Models of Ancient Maya Wetland Field Formation in the Maya Lands. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2023am-390345 https://doi.org/10.1130/abs/2023am-390345

White, M., Krause, S. M., Holliday, V., & Greenwald, D. (2023). A preliminary investigation of Holocene hydrology using alluvial sequences in the Rio Tularosa, New Mexico. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2023am-395532 https://doi.org/10.1130/abs/2023am-395532

Krause, S. M., White, M., Olivier, G., & Greenwald, D. (2023). Water management at Creekside Village archaeological site, Tularosa New Mexico: multiproxy reconstructions of a Mesilla phase reservoir. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2023am-394476 https://doi.org/10.1130/abs/2023am-394476

Krause, S. M., Damick, A., & Weaver, R. (2022). ARCHAIC LANDSCAPES IN NORTHERN NEW MEXICO: A GEOARCHAEOLOGICAL APPROACH. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2022am-379635 https://doi.org/10.1130/abs/2022am-379635

Beach, S., Beach, T., Doyle, C., Krause, S. M., & Smith, B. (2021). A SYNTHESIS OF CARBON ISOTOPE RATIOS OF SOIL PROFILES IN THE MAYA LOWLANDS. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2021am-370786 https://doi.org/10.1130/abs/2021am-370786

Krause, S. M., & Damick, A. (2021). Reconstructing mid-late Holocene soil sequences and anthropogenic impacts within the Rio Grande watershed, northern New Mexico. In *Geological Society of America Abstracts with Programs*. Geological Society of America. https://doi.org/10.1130/abs/2021am-365655 https://doi.org/10.1130/abs/2021am-365655

Beach, T., Luzzadder-Beach, S., Krause, S. M., & Doyle, C. (2019). An Early Anthropocene Analog: The Geomorphology and Hydrology of the Rio Bravo

Watershed in the Belize Tropics. In *Paleobiodiversity and Tectono-Sedimentary Records in the Mediterranean Tethys and Related Eastern Areas* (pp. 11–14). Springer.

5. Reports:

Brouwer Burg, M., & Krause, S. M. (2025). Investigating a Possible Agricultural Field Complex West of Chau Hiix (Operations 70 and 71). In *Investigations of the Belize River East Archaeology Project: A Report of the 2023 Field Seasons, Occasional Paper, No. 12* (Vol. 12). Belize: Institute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

Brouwer Burg, M., Krause, S. M., Haverland, F., & Harrison Buck, E. (2025). Reconnaissance of Archaic Occupations in and Around Crooked Tree Island. In *Investigations of the Belize River East Archaeology Project: A Report of the 2023 Field Seasons Occasional Paper, No. 12* (Vol. 12). Belize: Institute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

Krause, S. M., Brouwer Burg, M., & White, M. (2025). Reconstructing Wetlands in Northern Coastal Belize : Results from the January and May 2023 Seasons. In *Investigations of the Belize River East Archaeology Project: A Report of the 2023 Field Seasons Occasional Paper, No. 12* (Vol. 12). Belize: Institute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

Meitzen, K. M., & Krause, S. M. (2024). *Geomorphic and Sediment Analysis of the Upper Brazos River in Response to Saltcedar Control (CA-0004627)* (p. 14). Austin, Texas: Texas Parks and Wildlife Department.

F22AP03170_PPR Narrative_Meitzen_Aug2024-1.pdf
F22AP03170_Technical Report_Meitzen_Oct2024_MM_Dec2024_KM_clean-1.pdf

Additional Comments: The attached files include the annual progress report (August 2024) and the final progress report (Dec 2024).

Brouwer Burg, M., Krause, S. M., & Haverland, F. (2023). Excavation at the Chert Production Area of Gloria Camp (Operation 64). In *Investigations of the Belize River East Archaeology Project: A Report of the 2022 Field Season*. Belmopan, Belize: nstitute of Archaeology, National Institute of Culture and History, Belmopan, Belize.

Meitzen, K. M., & Kause, S. (2022). *Geomorphic Characteristics of the Upper Brazos River in Response to Invasive Saltcedar Management (CA-0002717)*. Austin, Texas: Texas Parks and Wildlife Department.

Meitzen_TPWD Brazos Report_CA-0002717_Sept2022-1.pdf

Krause, S. M. (2020). Geoarchaeology Investigations in the Western Lagoon. In *Investigations of the Belize River East Archaeology Project: A Report of the 2018 and 2019 Field Seasons*. Belmopan, Belize: Institute of Archaeology, Belmopan, Belize.

10. Other Works in Print:

Encyclopedia Entries:

Terry, R., & Krause, S. M. (2024). Chapter 165-1 Field Geochemistry. In *Encyclopedia Earth Sciences, Allan S. Gilbert et al. (Eds): Encyclopedia of Geoarchaeology Second Edition*. Springer.

B. Works Not in Print:

1. Papers Presented at Professional Meetings:

Krause, S. M., Trein, D., Aebersold, L., Society for American Archaeology, "The School of No Whining": How the Pedagogy of Fred Valdez informs multidisciplinary research in Northwestern Belize," Denver, CO, United States. (April 2026).

Krause, S. M. (Presenting Author), White, M., Greenwald, D., "Multiproxy geoarchaeological and environmental investigations at a Mesilla Phase archaeological site in southern New Mexico," San Antonio, TX, United States. (October 2025).

Krause, S. M., Brouwer Burg, M., Harrison Buck, E. (University of New Hampshire), Geological Society of America Annual Meeting, "Revisiting the Hydrology of Chau Hiix: New Geoarchaeological Investigations Focused on Prehistoric Water Management Features around this Maya site in Belize," Geological Society of America, Anaheim, CA, United States. (September 2024).

Krause, S. M., Brouwer Burg, M., Harrison Buck, E., American Association of Geographers Annual Meeting (Virtual), "Environmental and hydrological changes in coastal tropical wetlands over the Holocene: a case study from Crooked Tree, Belize," Virtual (Annual meeting was in Hawaii). (April 17, 2024).

Krause, S. M., White, M., Olivier, G., Greenwald, D., Geological Society of America Annual Meeting (Pittsburgh, PA), "Water Management at the Creekside Village Archaeological Site (Tularosa, NM): Multiproxy Reconstructions of a Mesilla Phase Reservoir," Pittsburugh, PA, United States. (October 2023).

Krause, S. M., INQUA Roma 2023 Congress, "Decades of research and new horizons for study within the anthropogenic wetlands of northern Belize ," Rome Italy, Rome, Italy. (July 2023).

Krause, S. M., Bhattacharya, T., Society Of American Archaeology, "The Anthropogenic Wetlands of Northwestern Belize: Decades of Research and New Horizons for Study (Papers in Honor of Timothy Beach)," Portland, OR, United States. (March 2023).

Krause, S. M., Damick, A., Geological Society of America, "The Holocene Anthropogenic Landscapes Project: Reconstructing anthropogenic impacts within streams and springs in the Rio Grande watershed, northern New Mexico," Denver, CO. (October 12, 2022).

Krause, S. M., Damick, A., American Association of Geographyers, "Reconstructing anthropogenic impacts within streams and springs in the Rio Grande watershed, northern New Mexico." (February 28, 2022).

Li, Y., Krause, S., McLendon, A., Jo, I., Southwest Division of the American Association of Geographers (SWAAG) annual meeting, "Teaching field-based courses amid the COVID-19 pandemic: a national survey and a case study of a Texas State Geography course," online. (October 14, 2021).

Krause, S. M. (Presenting Author), Beach, T. (Coauthor), Luzzadder Beach, S. (Coauthor), Harrison Buck, E. (Coauthor), Society for American Archaeology, "Geoarchaeological Investigations of Wetlands and Waterways in Crooked Tree, Belize.," Online due to global COVID19 pandemic. (April 2021).

Krause, S. M. (Presenting Author), Beach, T. (Coauthor), Luzzadder Beach, S. (Coauthor), Harrison-Buck, E., American Association of Geographers Annual Meeting, "How does remote sensing help inform long term soil and geomorphic changes within Belizean wetlands?," Online due to global COVID-19 pandemic. (April 2021).

Krause, S. M., Beach, T., Luzzadder-Beach, S., Harrison-Buck, E., Geological Society of America Annual Meeting, "Soil and Geoarchaeological investigations of wetlands and waterways in Crooked Tree, Belize," Online (due to COVID-19 pandemic). (October 2020).

2. Invited Talks, Lectures, and Presentations:

Smith, H. L., Mathison, E. E., Krause, S. M., Annual Meeting of the Society for American Archaeology, "Searching for the Late Pleistocene: Geoarchaeological Analyses of Sediment Cores from Spring Lake, San Marcos, Texas," Center for the Study of the First Americans, Texas A&M University, Denver, CO, United States. (April 2025).

Whitney, B. (Northumbria University), Friedel Juan, R. (University of Belize, Belmopan), Krause, S. M., KULCHA Symposium 2023, "Ancient Environmental Dynamics: Informing the Resilience and Sustainability of Belize," Keeping up with Language, Culture, Heritage and the Arts (KULCHA), Belize. (September 8, 2023).

5. Other Works not in Print:

a. Works "submitted" or "under review":

Book Chapters:

Krause, S. M. (Submitted / Under Review). Intensive Resource Use and Agriculture in Northwestern Belize. In *Ancient Maya Landscapes in Northwestern Belize*. USA: University of Florida Press.

Edited Books:

Krause, S. M., Guderjan, T., & Valdez, F. (Submitted / Under Review). *Ancient Maya Landscapes in Northwestern Belize*. USA: University of Florida Press.

Journal Articles:

Choi, S., Kim, Y. J., Umucu, E., Krause, S. M., & Walker, C. (Submitted / Under Review). Frozen Grids, Frozen Lives: A Systematic Review of the Nexus between Infrastructure Failure and Health Outcomes during Extreme Winter Weather. *Natural Hazards*. (December 2025)

Rosen, A., Damick, A., & Krause, S. M. (Submitted / Under Review). The Impact of Late Quaternary Climate Change and Landscape Fires on the Development of Hydrological Systems in Northern New Mexico. *Journal of Quaternary Science*. (December 31, 2024)

Colgan, K. S., Jensen, J., Duarte, A., & Krause, S. M. (Submitted / Under Review). A spatiotemporal assessment of 2020 Golden-cheeked Warbler breeding habitat and change over time. *PeerJ Life and Environment*. (2023)

Reports:

Meitzen, K. M., Krause, S. M., & Juarez Murphy, T. G. (Submitted / Under Review). *Using a small unmanned aerial system (sUAS) to model structure-from-motion (SfM) derived terrain modeling of the upper Brazos River*. (October 2025)

Additional Comments: Final (Draft) Technical Report Submitted to Texas Parks and Wildlife for CA-0006282

b. Works "in progress":

Journal Articles:

Smith, H. L., Krause, S. M., & Mathison, E. E. (In Preparation; Not Yet Submitted). Results of Geoarchaeological Coring Investigations at a Multicomponent Archaeological Site in Central Texas: The Stratigraphy at Spring Lake. *Geoarchaeology*.

Krause, S. M., Weaver, R., Damick, A., & Rosen, A. (In Preparation; Not Yet Submitted). Environmental response to shifting Holocene hydroclimate in the Rio Grande watershed, northern New Mexico. (September 14, 2024)

Krause, S. M., Beach, T., Luzzadder-Beach, S., & Graham, E. (In Preparation; Not Yet Submitted). The Wetland Fields of Lamanai.

c. Other Works Not in Print:

Demonstrations:

Krause, S. M., The Geological Society of America Annual Meeting, "The Hydrology of the Edwards Aquifer and the Geoarchaeology of Spring Lake, South-Central Texas." (October 2025).

Additional Comments: I conducted a lecture/demonstration as part of a larger field trip sponsored by the Geological Society of America. This took place during the annual meeting in 2025 and attracted a large (~50 individuals) international audience.

Smith, H. L., Krause, S. M., Mathison, E. E., Annual Sacred Springs Powwow, "Outreach with the Local Community: Paleoenvironments of Spring Lake, TX," Indigenous Cultures Institute, Meadows Center for Water and the Environment, San Marcos, TX, United States. (October 2024).

Smith, H. L., Krause, S. M., Annual Sacred Springs Powwow, "Outreach with the Local Community: Paleoenvironments of Spring Lake, TX," Indigenous Cultures Institute, Spring Lake, San Marcos, TX, United States. (October 8, 2023).

Posters:

Smith, H. L., Krause, S. M., Reid, A. E., Boyd, S., Lasater, D. W., Reinhardt, A., The 89th Annual Meeting of the Society for American Archaeology, "A Multicomponent Archaeological Site at Spring Lake, San Marcos, Texas," New Orleans Marriott and the Sheraton New Orleans, New Orleans, LA, United States. (April 2024).

Li, Y., Krause, S., McLendon, A., Jo, I., American Association of Geographers (AAG) annual meeting, "Teaching a geography field methods course amid the COVID-19 pandemic: reflections and lessons learned," online. (February 25, 2022).

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

Meitzen, Kimberly (Principal), Krause, Samantha Marie (Co-Principal). Geomorphic characteristics of the upper Brazos River in response to invasive saltcedar management, TPWD, State. (Submitted: October 2021). Grant.

Krause, Samantha Marie (Principal), Radoman-Shaw, Brandon Gregory (Co-Principal), Smith, Heather Lynn (Co-Principal), Wernette, Shelly Jean (Co-Principal), Kilby, James David (Co-Principal). EMBRACE-EAR-Growth: From Places to Peoples: A survey of geological materials and human-environment interaction on the Edwards Plateau that prioritizes student learning., National Science Foundation, Federal, $400,000.00. (Submitted: May 15, 2024, Funded: July 2025 - Present). Grant.
Full.Submission.Package_5197-1.pdf
Additional Comments: On Jan. 27, 2025 we were notified that the grant will be recommended for funding. The grant was funded in August, 2025

Meitzen, Kimberly Michelle (Principal), Krause, Samantha Marie (Co-Principal). Using a Small Unmanned Aerial System (sUAS) to Model Structure-From-Motion (SfM), Texas Parks and Wildlife Department, State, $14,996.00. (Funded: January 2024 - September 2025). Contract.
FE - CA-0006282 IAC - Small Unmanned Aerial Sys (sUAS)-Dr. Meitzen_FE-1.pdf

Meitzen, Kimberly Michelle (Principal), Krause, Samantha Marie (Co-Principal). Geomorphic and Sediment Analysis of the Upper Brazos River in Response to Saltcedar Control, Texas Parks and Wildlife Department, State, $80,102.00. (Submitted: 2022, Funded: 2023 - 2024). Grant.
Meitzen_TXST_CA-0004627 Contract-1.pdf

Brouwer Burg, Marieka (Principal), Harrison-Buck, Eleanor (Co-Principal), Krause, Samantha Marie (Supporting), Stemp, James (Supporting), Phillips,

Lori. Collaborative Research: Investigating Adaptive Strategies in Variable Environments, National Science Foundation, Federal, $152,092.00. (Funded: September 2021 - August 2024). Grant.

Additional Comments: I served as a supporting researcher on NSF Award 2120534, (PI M. Brouwer Burg). and conducted the geoarchaeological, geochemical, and geomorphological research for this project. The project concluded in 2024.

Grossman, Kathryn (Principal), Paulette, Tate (Co-Principal), McCarthy, Andrew (Supporting), Graham, Lisa (Supporting), Krause, Samantha Marie (Supporting), Lucas, Leilani (Supporting), Erb-Satullo, Nathaniel (Supporting), Cradic, Melissa (Supporting), Marshall, Maureen. An Investigation into the Governance of Village Life, NSF, Federal. (Funded: July 2020 - June 2023). Grant.

Additional Comments: Krause served as collaborator on NSF Award 1951147, ($200,948; period of support: 7/15/2020-6/30/2025, PI K. Grossman). My work on this project has concluded.

Meitzen, Kimberly Michelle (Principal), Krause, Samantha Marie (Co-Principal). Geomorphic Characteristics of the Upper Brazos River in Response to Invasive Saltcedar Management, Texas Parks and Wildlife Department, State, $38,160.00. (Submitted: 2021, Funded: 2022). Grant.
CA-0002717 - ATC 1 - Texas State_FE-1.pdf

2. Submitted, but not Funded, External Grants and Contracts:

Krause, Samantha Marie. CAREER: A landscape of water and fire over the Holocene: an interdisciplinary effort that prioritizes natural and cultural heritage in New Mexico., National Science Foundation, Federal, $567,638.00. (Submitted: July 27, 2023). Grant.

Krause, Samantha Marie. The Human Landscape of Water and Fire: Environmental Reconstructions in the Rio Grande Watershed, Northern New Mexico., National Geographic Level I ~ NGS Grantee Community, Private / Foundation / Corporate, $19,989.00. (Submitted: June 27, 2023). Grant.

Krause, Samantha Marie. The Human Landscape of Water and Fire: Holocene Reconstructions within the Rio Grande Watershed, Northern New Mexico, Federal, $189,808.00. (Submitted: August 21, 2022). Grant.

Additional Comments: This proposal was declined in fall 2021, and our team was invited to resubmit spring 2022. The proposal was declined spring 2022, and our team was invited to resubmit summer 2022. The proposal was again declined winter 2022, and our team has been invited to resubmit spring 2023. I am currently assessing as to if we will submit under a different NSF directorate.

Krause, Samantha Marie. CAREER: Tropical coastal wetlands over the Holocene: an interdisciplinary effort that prioritizes natural and cultural heritage in Belize., National Science Foundation, Federal, $519,656.00. (Submitted: July 27, 2022). Grant.

Additional Comments: The proposal was first submitted to the NSF Division of Earth Sciences on July 27, 2022. The proposal was declined but recommended for revision and resubmission.

Faroughi, Salah Aldin (Principal), Yuan, Yihong (Co-Principal), Krause, Samantha Marie (Co-Principal). SitS: Sensing the Impacts of Climate Change on Historically Unpredictable Volumetric Fluctuations in Surficial Soils, National Science Foundation, Federal, $1,200,000.00. (Submitted: April 2022). Grant.

Faroughi, Salah Aldin (Principal), Chen, Yihong (Co-Principal), Krause, Samantha Marie (Co-Principal). SITS: Sensing the impacts of climate change on unpredictable volumetric fluctuations in surficial soils, NSF, Federal, $400,000.00. (Submitted: April 2022). Grant.

3. Funded Internal Grants and Contracts:

Krause, Samantha Marie. Environmental changes in an ancient agroecosystem: a geoarchaeological approach to understanding wetlands in coastal Belize., Research Enhancement Program, Texas State University, $8,000.00. (Submitted: October 2023, Funded: January 2024 - Present). Grant.

Li, Yanan (Principal), Krause, Samantha Marie. Environmental history in the Lincoln National Forest, New Mexico, TXST Division of Research, College of Liberal Arts, and Department of Geography and Environmental Studies, Texas State University, $3,000.00. (Funded: March 9, 2023 - July 31, 2024). Grant.

Krause, Samantha Marie. Reconstructing hydrology and management of an ancient reservoir in southern New Mexico., Office of Research and Sponsored Programs, Texas State University, $7,992.00. (Submitted: October 2021, Funded: January 21, 2022 - May 31, 2023). Grant.

4. Submitted, but not Funded, Internal Grants and Contracts:

Krause, Samantha Marie, Wernette, Shelly Jean, Radoman-Shaw, Brandon Gregory, Li, Yanan, Smith, Heather Lynn, Kilby, James David. Limited Submission: Research and Education Program for Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI):

Equipment/Instrumentation, Limited internal submission for Department of Defense, Federal, $886,725.00. Grant.

Additional Comments: Research and Education Program for Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI): Equipment/Instrumentation, Fiscal Year 2025, Funding Opportunity Announcement W911NF25S0005

Choi, Shinwoo (Principal), Percent Contribution: 30%, Hwang, Sangchul (Co-Principal), Percent Contribution: 20%, Krause, Samantha (Co-Principal), Percent Contribution: 20%, Kim, Yong Je (Co-Principal), Percent Contribution: 20%, Beard, John (Co-Principal), Percent Contribution: 10%. Water Contamination and Health Assessment in a Vulnerable Environmental Justice Community: A Case Study in Port Arthur, Texas, Texas State University, $29,980.00. (Submitted: February 20, 2022). Grant.
MIRG 2022 proposal submission proof-1.pdf

Krause, Samantha Marie. Reconstructing Holocene Fire and Land Use History of the Northern Rio Grande Valley, New Mexico, Research Enhancement Program, Texas State University, $7,682.91. (Submitted: October 13, 2020). Grant.

D. Scholarly / Creative Fellowships, Awards, Honors:

Award / Honor Recipient: Research Associate of the Year, Jornada Research Institute.
September 2025

Award / Honor Recipient: INQUA 2023 Congress Early Career Researcher Travel Award, International Union For Quaternary Research.
February 1, 2023 - July 31, 2023

Award / Honor Recipient: 2021 Paper of the Year Award (Ellen Mosley Thompson Award), American Association of Geographers, Paleoenvironmental Change Specialty Group.
2021

Additional Comments: I was a coauthor (3rd author) on a *Proceedings of the National Academy of Sciences* article which won the 2021 Paper of the Year Award from the American Association of Geographers, Paleoenvironmental Change Specialty Group.

Award / Honor Recipient: INQUA Congress Fellowship Program Travel Award (Dublin, Ireland), INQUA Congress.
July 2019

Award / Honor Recipient: Denise L. Gold Excavation Grant (American Schools of Oriental Research) for geomorphological survey in Cyprus, American Schools of Oriental Research.
July 2018

E. Scholarly / Creative Professional Development Activities Attended:

Scholarship and Teaching Excellence Program, Texas State University, "Scholarship and Teaching Excellence (STEP) program, Texas State University," Texas State University. (August 2020 - 2021).

F. Media Recognition:

Internet, Smithsonian Magazine. (November 27, 2024).
Archaeologists Discover Ancient Canals Used to Trap Fish in Belize 4000 Years Ago Smithsonian-1.pdf
Additional Comments: Archaeologists Discover Ancient Canals Used to Trap Fish in Belize 4,000 Years Ago: https://www.smithsonianmag.com/smart-news/archaeologists-discover-ancient-canals-used-to-trap-fish-in-belize-4000-years-ago-180985548/

Internet, New York Post. (November 25, 2024).

Additional Comments: Archaeologists discover 4,000-year-old fishing canals used by predecessors of Mayans in breakthrough find

https://nypost.com/2024/11/25/science/archaeologists-discover-4000-year-old-canals-used-to-fish-by-predecessors-of-ancient-maya/

Internet, Newsroom : Texas State University. (November 25, 2024).
Large-scale fish trapping facilities may have fostered early Maya population growth Newsroom Texas State University-1.pdf
Additional Comments: Large-scale fish trapping facilities may have fostered early Maya population growth : Newsroom : Texas State University

Large-scale fish trapping facilities may have fostered early Maya population growth : Newsroom : Texas State University

Internet, Associated Press. (November 22, 2024).

Additional Comments: Archaeologists discover 4,000-year-old canals used to fish by predecessors of ancient Maya https://apnews.com/article/maya-fish-canal-civilization-pyramids-ebec21901049b634ab910d8190cf89ef

Internet, Science News. (November 22, 2024).
Ancient Central Americans built a massive fish-trapping system-1.pdf
Additional Comments: Ancient Central Americans built a massive fish-trapping system

https://www.sciencenews.org/article/ancient-fish-trapping-system-maya

Internet, The Guardian. (November 22, 2024).

Additional Comments: 4,000-year-old canals used for fishing by Maya predecessors discovered in Belize

https://www.theguardian.com/science/2024/nov/22/ancient-fishing-canals-belize

Internet, EOS Science News by AGU. (May 5, 2021).

Additional Comments: https://eos.org/articles/ancient-maya-made-widespread-changes-to-wetland-landscape

Magazine, American Archaeology. (September 2, 2025).
Fall_2025_Vol29No3_magazine (1)-1.pdf
Additional Comments: American Archaeology Vol. 29, No. 3

Radio, Deutschlandfunk: German public radio station. (November 22, 2024).

IV. SERVICE

A. Institutional

1. University:

Geo and Env. Studies Faculty Senate Liaison, Faculty Senate. (January 2024 - Present).

Member, McNair Faculty Council Member. (March 2021 - April 2021).

Additional Comments: Served as a faculty volunteer to provide input and ideas for the McNair Grant Proposal.

2. College:

Member, CoLA Research Enhancement review committee. (September 11, 2024 - December 6, 2024).

3. Department/School:

Undergraduate Advisor, GTU (Gamma Theta Upsilon) Geography Honor Society Faculty Advisor. (August 2020 - Present).

Member, Graduate Committee, Geography Department. (August 2023 - May 2024).

Member, Departmental Newsletter Committee. (January 2023 - August 2023).

Member, ARSC Committee. (August 2022 - January 2023).

Member, Graduate Committee, Geography Department. (August 2020 - August 2022).

Member, Search Committee for TT in GIScience with a concentration in Cartography /Geovisualization. (September 2021 - April 2022).

Member, Texas Geography Student Research Symposium (TxGSRS) Committee Member. (August 2019 - May 2020).

B. Professional:

Officer, Geoarchaeology Division of the Geological Society of America. (October 2025 - Present).

Additional Comments: I am currently an officer Geoarchaeology Division of the Geological Society of America serving as a member of the Awards Committee

Reviewer / Referee, Holocene. (2026).

Attendee / Participant, 2025 UCAR Annual Members Meeting and Early Career Workshop, Boulder, CO, United States. (2025).

Additional Comments: Attended the 2025 UCAR Annual Members Meeting as well as the early career workshop hosted prior to the meeting.

Reviewer / Referee, Quaternary Science Reviews. (2025).

Coordinator / Organizer, Field Trip for the Geological Society of America Annual Meeting. (February 2025 - October 2025).

Additional Comments: Field trip organizer for the Geological Society of America's annual meeting. Co-lead the field trip "The Hydrology of the Edwards Aquifer and the Geoarchaeology of Spring Lake, South-Central Texas" with Rolfe Mandel

Officer, Geoarchaeology Division, Geological Society of America. (October 2023 - October 2025).

Additional Comments: I served as the Past Chair for the division from 2023-2025.

Reviewer / Referee, Journal of Archaeological Science: Reports. (May 2025 - July 2025).

Reviewer / Referee, Quaternary Science Advances . (June 2025).

Reviewer / Referee, Environmental Archaeology: The Journal of Human Palaeoecology. (May 2025 - June 2025).

Reviewer / Referee, Environmental Archaeology: The Journal of Human Palaeoecology. (December 2024 - January 2025).

Reviewer / Referee, The Annals of the American Association of Geographers. (October 2024 - November 2024).

Member, Joint Technical Program Committee: Geological Society of America. (April 2020 - October 2024).

Additional Comments: This committee helps to finalize the technical program for GSA’s annual meetings by participating in the Web-based selection and scheduling of abstracts, as well as topical session proposal review.

Reviewer / Referee, Quaternary International. (July 2024).

Chair, Honors Committee: Paleoenvironmental Change Specialty Group of the Association of American Geographers. (September 2022 - December 2023).

Mentor, Mentor for the On to The Future/GSA Associated Societies Expo, Pittsburgh, PA, United States. (September 2023 - October 2023).

Additional Comments: Served as a mentor for students at the GSA Connects 2023 Short Course 508 - On To the Future and GSA Associated Societies Expo: Finding Your Pathway to Geosciences Professions.

Chair, Chair of the Geological Archaeology Division, Geologic Society of America. (August 2021 - August 2023).

Reviewer / Referee, Holocene. (March 2023 - April 2023).

Reviewer / Referee, Remote Sensing An Open Access Journal from MDPI. (March 2021 - November 2022).

Member, Honors Committee: Paleoenvironmental Change Specialty Group of the Association of American Geographers. (April 2021 - September 2022).

Reviewer / Referee, Frontiers in Ecology and Evolution, section Paleoecology. (April 2022).

Reviewer / Referee, Catena. (September 2021).

Officer, Vice Chair of the Geological Archaeology Division, Geologic Society of America. (August 2019 - August 2021).

Reviewer / Referee, Annals of the Association of American Geographers, Taylor & Francis. (2020).

Reviewer / Referee, Journal of Cave and Karst Studies, National Speleological Society. (2020).

Reviewer / Referee, Paleoceanography and Paleoclimatology, American Geophysical Union. (2020).

Co-Chair, Advances in Geoarchaeology Session co-chair. Annual Meeting of the Geological Society of America, online due to COVID-19 pandemic. (October 2020).

Coordinator / Organizer, 2020 Sibley Conference on Ancient America. The Mesoamerican Center, University of Texas at Austin. (August 2019 - February 2020).

Reviewer / Referee, Geomorphology, Elsevier. (2019).

Reviewer / Referee, Holocene: SAGE Publications. (2019).

Reviewer / Referee, Journal of Anthropological Archaeology, Elsevier. (2019).

C. Community:

Board Member, Jornada Research Institute, Tularosa, NM. (August 5, 2023 - Present).

Additional Comments: The Jornada Research Institute (JRI) has as its mission the study of the archaeological, ethnohistoric, historic and natural resources of the northern Chihuahuan Desert of Arizona, New Mexico, West Texas and adjacent regions. JRI is committed to the protection and preservation of these resources so that current and future generations may benefit from their research and educational values.

Organizer, 2025 Tularosa Basin Conference (Theme: Archaeoastronomy & Celestial Geometry), Ruidoso, NM. (July 2025).

Additional Comments: The Tularosa Basin conference is a regional conference organized by the Jornada Research Institute and focuses on archaeological, historic, and ecological research in the Tularosa Basin and surrounding areas of New Mexico, Arizona, and Texas.

Volunteer, Science Mill High School Climate Action Program: Panelist, San Marcos, TX. (June 23, 2023).

Additional Comments: Science Mill in Johnson City, TX is a K-12 STEM Education provider that runs a Climate Action summer program for high school students. The Community Forum was the culminating event of the summer program, where students presented pitch decks of their proposed nature-based climate solutions to a group representing climate change research, education, communication, and industry. As a panelist, I gave constructive feedback and encouragement to the students and provided a Q&A panel with students asking questions about climate action related education careers, and opportunities.

Volunteer, 2022 Tularosa Basin Conference, Ruidoso, NM. (June 2022).

Additional Comments: The Tularosa Basin conference is a regional conference organized by the Jornada Research Institute and focuses on archaeological, historic, and ecological research in the Tularosa Basin and surrounding areas of New Mexico, Arizona, and Texas.

D. Organization Memberships:

Association of American Geographers (AAG). (August 2014 - Present).

Society for American Archaeology (SAA). (August 2011 - Present).

Geological Society of America (GSA). (January 2007 - Present).