### GESSRS Program Overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00am - 9:00 am</td>
<td>Registration &amp; breakfast/coffee</td>
<td>ELA 344</td>
</tr>
<tr>
<td>8:30am - 8:50 am</td>
<td>Welcome and introductions</td>
<td>ELA 311</td>
</tr>
<tr>
<td>9:00am - 10:20 am</td>
<td>F2F Paper Session I, Virtual Session 1 (concurrently)</td>
<td>ELA 311</td>
</tr>
<tr>
<td>10:30am - 11:50 am</td>
<td>Paper Sessions II and III, Virtual Session 2 (concurrently)</td>
<td>ELA 311 (II), ELA 316 (III)</td>
</tr>
<tr>
<td>12:00pm – 1:00 pm</td>
<td>Lunch break</td>
<td>ELA 344</td>
</tr>
<tr>
<td>12:30pm - 2:00 pm</td>
<td>Poster Session (in-person)</td>
<td>ELA Third Floor</td>
</tr>
<tr>
<td>2:00pm - 3:00 pm</td>
<td>Paper Session IV and V, Virtual Sessions 3 (concurrently)</td>
<td>ELA 311 (IV), ELA 316 (V)</td>
</tr>
<tr>
<td>3:00 – 3:30 pm</td>
<td>Coffee Break</td>
<td>ELA First Floor Atrium</td>
</tr>
<tr>
<td>3:30pm - 4:30 pm</td>
<td>Awards Ceremony &amp; Keynote</td>
<td>ELA 116</td>
</tr>
</tbody>
</table>
Notes to GESSRS presenters and participants:

1. Paper sessions will take place in ELA 311 and ELA 316. Virtual Sessions will be simulcasted in ELA 312 for F2F participants.
2. For virtual participants, please access Zoom using the link provided in the email you received with the program. It is preferred to use a hard wire internet connection to connect through Zoom. Avoid public Wi-Fi services on non-secure networks. If you have Wi-Fi challenges, we have plenty of lab space in the department for you to use with webcams available.
3. Install the latest version of Zoom (currently Version 5.9.3(3169)). This will ensure all participants have the latest, more secure version.
4. When attending the meeting virtually, please make sure to have your **full name and university affiliation** as your Zoom screen name.

**DETAILED GESSRS PROGRAM**

8:00am - 9:00am  
**REGISTRATION & BREAKFAST**  
Room: ELA 344

8:30am - 8:50am  
**WELCOME TO GESSRS**  
Room: 311  
Also simulcast via Zoom  
Host: Alisa Hartsell and Emilee Freeman

9:00am - 10:20am  
**PAPER SESSION I & VIRTUAL SESSION 1 (CONCURRENTLY)**

**Paper Session I: Climate Change & Natural Disasters**  
Room: ELA 311  
Host: Dr. Rebecca Davio

9:00-9:20 **Hailey Richardson**  
*Fire and Flood Hazards on the Big Island of Hawaii*

9:20-9:40 **Derek Mangino Sirvent**  
*Using Social Science to Save The Environment*
9:40-10:00 Jared Messick
*Communicating Climate Change: A Review of the Elements of Climate Change Communication and Their Impacts on Behavior*

10:00-10:20 Binay Thapa
*Climate change perception and adaptation among Indigenous farmers: A study on Thamis of Dolkha district, Nepal*

**Virtual Session 1: Urban Geographies and Geography Education**

**Host:** Dr. Ron Hagelman III  
*Simulcast viewing for in person participants available in ELA 312*

9:00-9:20: Hilary Ansah  
*Revealing Corporate Street Hawking in Accra, Ghana*

9:20-9:40 Sojung Huh  
*Assessing Quality of TPACK-based GST Integration of K-12 Teachers*

9:40 -10:00 Kelly Nolan  
*A Virtual Tour Through Our Nation’s Landforms: The Grand Canyon*

10:00 – 10:20 Lisa Elikan  
*Choosing a College: Does Location Matter?*

---

10:30am – 11:50am  
**PAPER SESSIONS II & III, VIRTUAL SESSION 2 (ALL CONCURRENTLY)**

**Paper Session II: Political and Cultural Ecology**

**Host:** Dr. Rosalie Ray  
**Room:** ELA 311

10:30-10:50 Madeline Wade  
*Blue Index San Marcos: Assessing Emotional Experiences, Values, and Use of Waterscapes in San Marcos, TX*

10:50- 11:10 Emily Runnels, Najmeh Heidarian, Ash Crane, and Aksel Sjogren  
*Swimming Pigs in Sacred Springs: Settler Colonialism in the Mermaid Capital of Texas*
11:00-11:20 **Delorean Wiley**  
Save water, drink beer: Texas craft breweries as “hydrosocial” spaces and measuring the impact they can have on Texas water conservation efforts

11:20-11:50 **Walter Furness**  
Bioethics and yeast-human entanglements in synthetic biology

**Paper Session III: Urban and Transportation Geographies**  
**Room:** ELA 316  
**Host:** Ben Zhan  
**Judges:** Dr. Jennifer Jensen, Dr. Osvaldo Muñiz-Solari

10:30-10:50 **Dane Atkins**  
Linear Trail Analysis: Automation and Sensitivity

10:50-11:10 **Keenon Lindsey**  
Title VI for On Demand Micro Mobility: Equity in Public Transit

11:10-11:30 **Grant Amlani**  
Sorting Out Recycling: Visualization of Waste-Disposal Guidelines and Analysis of Waste Management Approaches as Devices for Impacting Policy in the Dallas-Fort Worth Metroplex

11:30-11:50 **Luke Scherer**  
*TBD*

**Virtual Session 2: Historical Geographies**

**Host:** Dr. Yanan Nancy Li  
**Judges:** Dr. Ron Hagelman III, Dr. Sarah Blue  
*Simulcast viewing for in person participants available in ELA 312*

10:30-10:50 **Yusik Choi**  
Pride and Prejudice Represented in Texas Historical Markers

10:50 – 11:10 **Anh Adams**  

11:10 – 11:30 **Xiu Wu**  
Place-based Women’s Civil Rights Recognition in Texas During Civil War

11:30-11:50 **Michelle Zelenka**  
New Urbanism and Displacement
12:00pm – 1:00 pm
LUNCH BREAK
Room: ELA 344 – Box lunches available for pick-up for registered presenters and attendees.

12:30 pm – 2:00 pm
POSTER SESSION (In Person): ELA Third Floor

Undergraduate Student Poster Presenters
1. Natalie Peet
   *Dixie Fire- A Time Series Analysis & Burn Scar Comparison*
2. Jenna Howard
   *Contaminant Analysis of Domestic Well Water in Norton and Phillips Counties, Kansas*
3. Jeremy Walker-Lee
   *A Study of Thermokarst Lakes in Siberia*

Graduate Student Poster Presenters
4. Joanna Weathersby
   *A Broader View of Conservation: Mapping Natural and Cultural Resources in a Working-lands Landscape*
5. Christiana Eziashi
   *Using geochemical composition to investigate lateral continuity of some Paleozoic rocks within Central Kansas Uplift, USA*
6. Christopher Kingwill
   *Integrating Geographic and Historic Data of Guam To Determine Conservation Needs and Reintroduction Potential for the Guam Kingfisher*
7. Mitchell Lukens
   *Warm-Blooded Mosasaurs? How a Kansas Fossil May Reveal Ancient Physiologies*
8. Priyanjali Bose
   *Integrated exploration, analysis & improvements to urban water supply based on institutional (WSI) mechanisms for informal slum settlements of Indian cities*
9. Danielle Smilovsky
   *Olive & 71st Avenue – Peoria Subsidence Feature Investigation*
10. Haley Johnson
    *Macro- to Micro- Litter Accumulation in the San Marcos River, San Marcos, Texas, USA*
11. Mei Yang
    *Spatial Accessibility to Primary Care in Texas and its Association with 13 Health Outcomes*
12. Marissa Greer  
Renewable Energy in Texas: Access, Distribution, and Equity in Dallas- Fort Worth

13. Molly Miranker  
Myriad Maps and Applied Anthropology: Needs and Limitations

14. Shayne O’Brien  
Arctic Teleconnections as a Driver of North Atlantic Iceberg Presence, 1983-2020

15. Alexa Franks  
Dye Tracing and the Effects of Infrastructure in Hidden River Cave, Horse Cave, KY

16. Nika Teiler  
Times to Visit Japan to See Cherry Blossom

17. William Wallace  
Population Growth and Municipal Water Resource Insecurity within Mesa County, Colorado

18. Diane Nunez  
Airmass Climatology of Asthma Related Hospitalizations in Kansas and Oklahoma

19. Joshua Knolla  
Using GIS to Locate Evacuation Areas in Hawaii County, Hawaii

2:00pm – 3:00pm  
PAPER SESSIONS IV & V, VIRTUAL SESSION 4 (CONCURRENTLY)

Paper Session IV: Geomorphology & Physical Landscapes  
Room: ELA 311  
Host: Dr. Jennifer Jensen

2:00-2:20 Aspen Manning  
Environmental controls on the riparian vegetation of ephemeral streams in the arid Southwest

2:20- 2:40 Alexandra Smith  
Lichen at Enchanted Rock State Natural Area

2:40 – 3:00 Elizabeth Schumann  
Reconstructing glacial retreat using dendroglaciology and remote sensing in the Tian Shan Mountains, China
Paper Session V: Migration, Mobility, and Asylum  
Room: ELA 316  
Host: Dr. Samantha Krause

2:00-2:20 Alisa Hartsell  
_Navigating Immigration Courts: attorneys’ perspectives of asylum cases in Texas Immigration Courts_

2:20-2:40 Elise Thompson  
_The Role of Climate Change and Natural Hazards in Migration from Central America_

2:40-3:00 Kathryn McDaniel  
_Grassroots Refugee Governance and Spaces of Exception Along the US-Mexico Border_

Virtual Session 3: Hazards & the Environment

Host: Dr. Nancy Li  
_Simulcast viewing for in person participants available in ELA 312_

2:00 – 2:20 Aidan K. McLendon  
_Anthropogenic Resources Contribute to Settlement of Mud-Nesting Barn Swallows (Hirundo rustica) in an Arid Environment_

2:20 – 2:40 Morgan Cantu  
_Lake Nyos Disaster_

2:40 – 3:00 Chikondinaka Ekeanyanwu  
_Examining Residents’ Vulnerability from the Flood Hazard in the Onion Creek Neighborhood of Austin, Texas: Who is At-Risk and Why?_

3:00 – 3:30 pm  
**COFFEE BREAK**  
Room: ELA First Floor Atrium
3:30pm - 4:30pm

AWARD CEREMONY AND KEYNOTE ADDRESS

Physical Location: ELA 116
Also simulcast via Zoom

Keynote Speaker: Dr. Robert E. Mace, Ph.D., P.G.
Keynote Address Title: “Five Gallons in a Ten Gallon Hat: The (un)sustainable Development of Groundwater in Texas”
Opening Remarks: Dr. Yongmei Lu

Introduction: Alisa Hartsell and Emilee Freeman

Keynote Address Abstract: Due to the slow feedback aquifers generally provide to users, groundwater production often far exceeds sustainable levels before a problem—and possible solutions—are identified. This has been the case in Texas where groundwater production on the Southern High Plains from the Ogallala Aquifer is the worldwide poster child for the consequences of uncontrolled groundwater pumping. After decades of the state’s water planners calling for the sustainable development of groundwater in Texas—including a proposal to pipe water from the Mississippi River into Texas to bring the state’s aquifers into sustainable management—groundwater planning decisions now rest with groundwater conservation districts, who are calling for the unsustainable development of most of the state’s aquifers. However, Texas has an opportunity to consider groundwater sustainability since current production for all aquifers excluding the Ogallala Aquifer is only 80 percent of sustainable levels. But time is running out since it is politically difficult to reduce people’s groundwater use after they have been using it. Of the 21 aquifer systems analyzed, 13 are currently being produced at or below sustainable levels with plans to shrink that number to 5. At that point, our ten-gallon hat will have less than 2.5 gallons in it.
**TxEESRS Planning Committee, 2021-2022**

**Faculty Advisors:**
Dr. Michael Solem  
Dr. Jennifer Devine  

**PhD Co-Chairs:**
Alisa Hartsell  
Aidan K. McLendon  

**Masters Co-Chairs:**
Andrew Adams  
Emilee Freeman  

**Staff Advisors:**
Allison Glass-Smith  
Charles Robinson  

**Special Thanks To:**

Texas State Department of Geography and Environmental Studies faculty, staff, and students for their support, attendance, and participation!

Dr. Yongmei Lu, Department Chair  
Dr. Jason Julian, Department Associate Chair  
Dr. Benjamin Zhan, Graduate Coordinator  
Dr. Jennifer Devine, Field Trip Coordinator  

All faculty who served as judges, advisors, and session moderators  

Geography Department Staff:  
Angelika Wahl  
Charles Robinson  
Allison Glass-Smith  
Dan Hemenway  
Joyce Wilkerson  

The Meadows Center for Water and the Environment staff  
Field trip hosts: Dr. Mario Garza and Maria F. Rocha and the Indigenous Cultures Institute  

Department of Geography and Environmental Studies student workers and student volunteers
Thank you to our prize donors!

https://www.bkstr.com/texasstatestore/home

The Meadows Center for Water and the Environment

https://www.meadowscenter.txstate.edu

https://www.codyssmtx.com