

Middle States Division
American Association of Geographers
Annual Meeting
October 20 – 21, 2017
Geneseo, New York



GENESEO

2017 Middle State Division Annual Meeting

Meeting Organization and Arrangements

Local Arrangements

James Kernan, *SUNY Geneseo*
Geography Faculty and Students

Geography Bowl

Pankaj Lal, *Montclair University*

Student Paper Competition

Michael Davis, *Kutztown University*

Finances

Jo Margaret Mano, *SUNY New Paltz*

Elections

Joan Welch, *West Chester University*

Middle States Website

Paul Marr, *Shippensburg University*

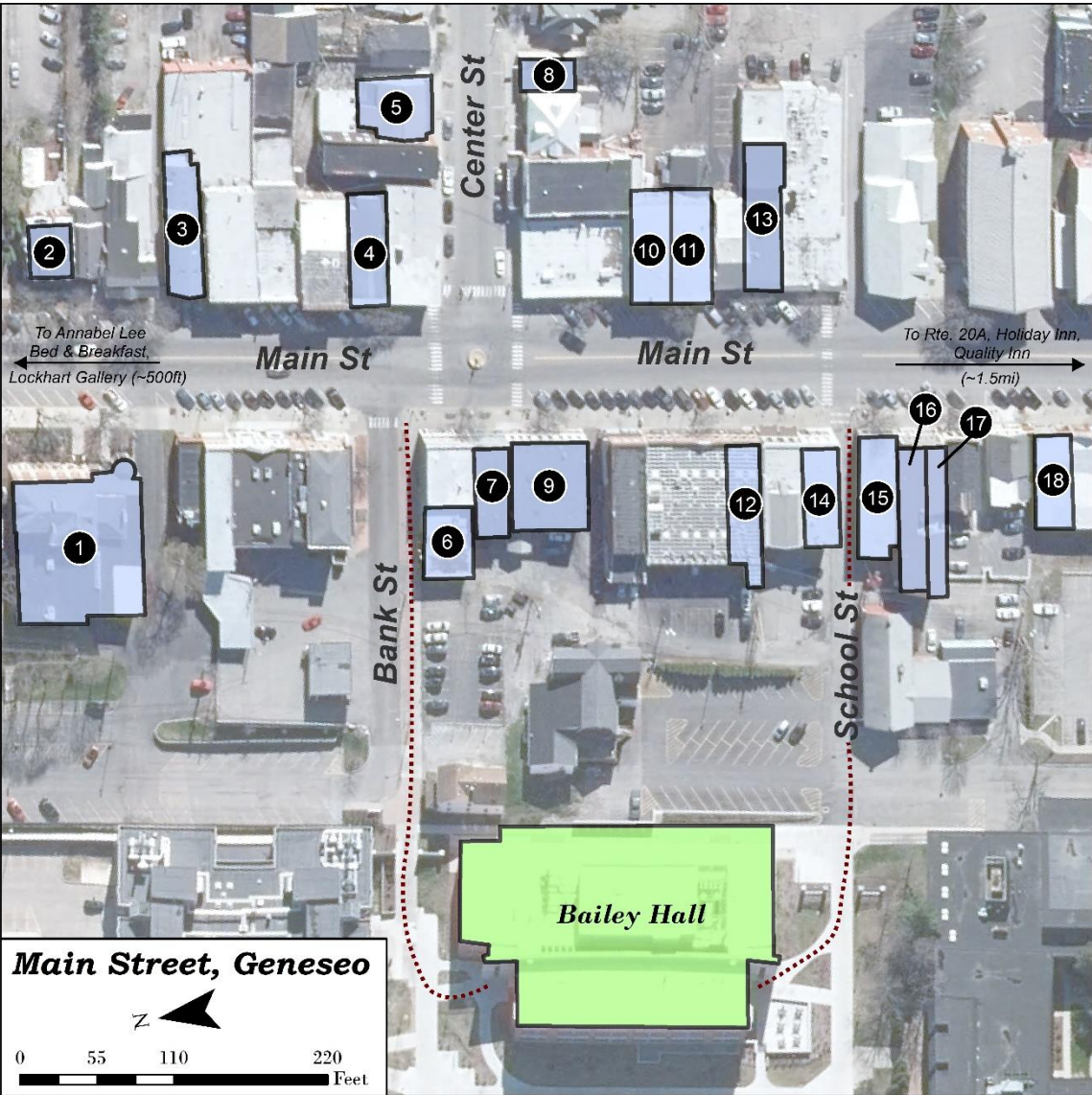
<http://msaag.aag.org/middle-states-geographer/>

Middle States Division Officers

President:	James Kernan, <i>SUNY Geneseo</i>
Vice President:	Pankaj Lal, <i>Montclair University</i>
Secretary:	Michael Davis, <i>Kutztown University</i>
Executive Director:	Jo Margaret Mano, <i>SUNY New Paltz</i>
Regional Council:	Robert Mason, <i>Temple University</i>
Past President:	Joan Welch, <i>West Chester University</i>
Middle States Geographer Editors:	Adam Kalkstein, <i>USMA West Point</i> Paul Marr, <i>Shippensburg University</i>

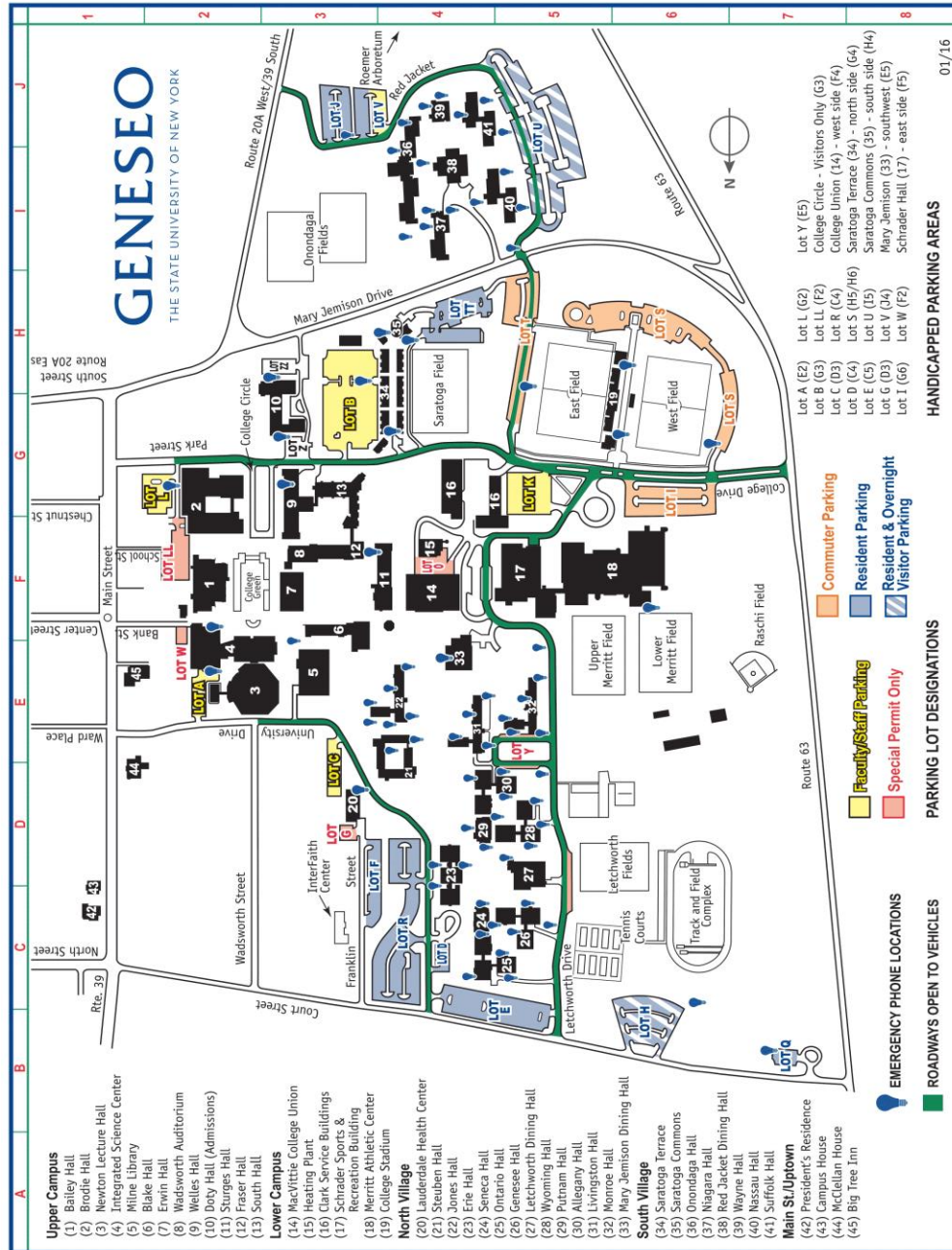
**Sponsored by the SUNY Geneseo Department of Geography and the SUNY Geneseo chapter
of Gamma Theta Upsilon**

Venues and Village Amenities



- | | | |
|---|--|--|
| 1 The Big Tree Inn
<i>Traditional tavern, steaks, American</i> | 7 Aunt Cookie's Sub Shop
<i>Submarine sandwiches, cookies</i> | 13 Geneseo Family Restaurant
<i>Diner, breakfast, lunch, dinner</i> |
| 2 Club 41
<i>Old-timey American, pub</i> | 8 Intermissions
<i>Bar & grill, live music</i> | 14 Main Moon
<i>Chinese, take-out</i> |
| 3 Cricket's Coffee Company
<i>Coffee & tea, pastries, cafe</i> | 9 EuroCafe
<i>Deli, Polish, dessert</i> | 15 Pizza Paul's
<i>Pizza, meatballs</i> |
| 4 Kelly's Saloon
<i>Remodeled saloon, beer, spirits</i> | 10 Mama Mia's
<i>Pizza, Italian, wraps</i> | 16 University Hots
<i>Garbage plates, hamburgers, fries</i> |
| 5 The Idle Hour
<i>Historic college bar</i> | 11 Sweet Arts Bakery
<i>Coffee, tea, pastries</i> | 17 Lighter Side Eatery
<i>Customizable pitas, salads, gyros</i> |
| 6 Bar-Eat-O
<i>Fast casual, Mexican, cocktails</i> | 12 Finger Lakes Cookie Co. & Creamery
<i>Fresh baked cookies, ice cream</i> | 18 Cafe Shiloh
<i>Coffee, tea</i> |

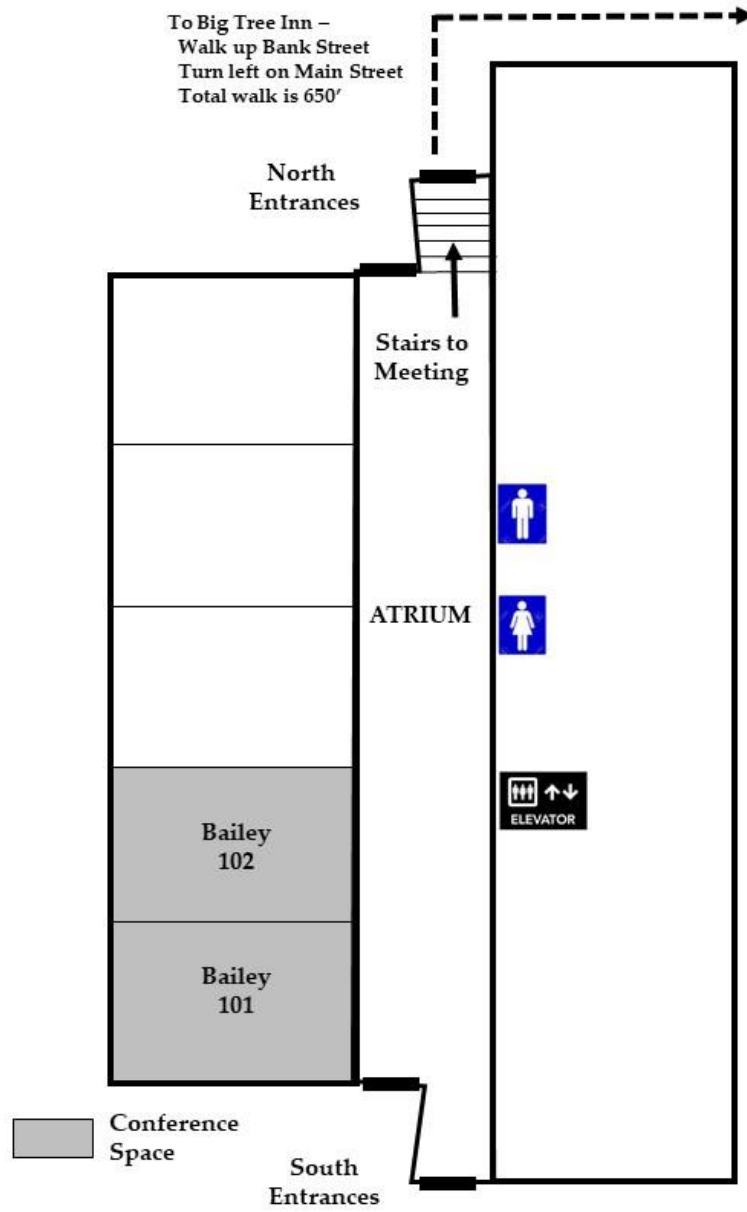
Campus Map and Parking



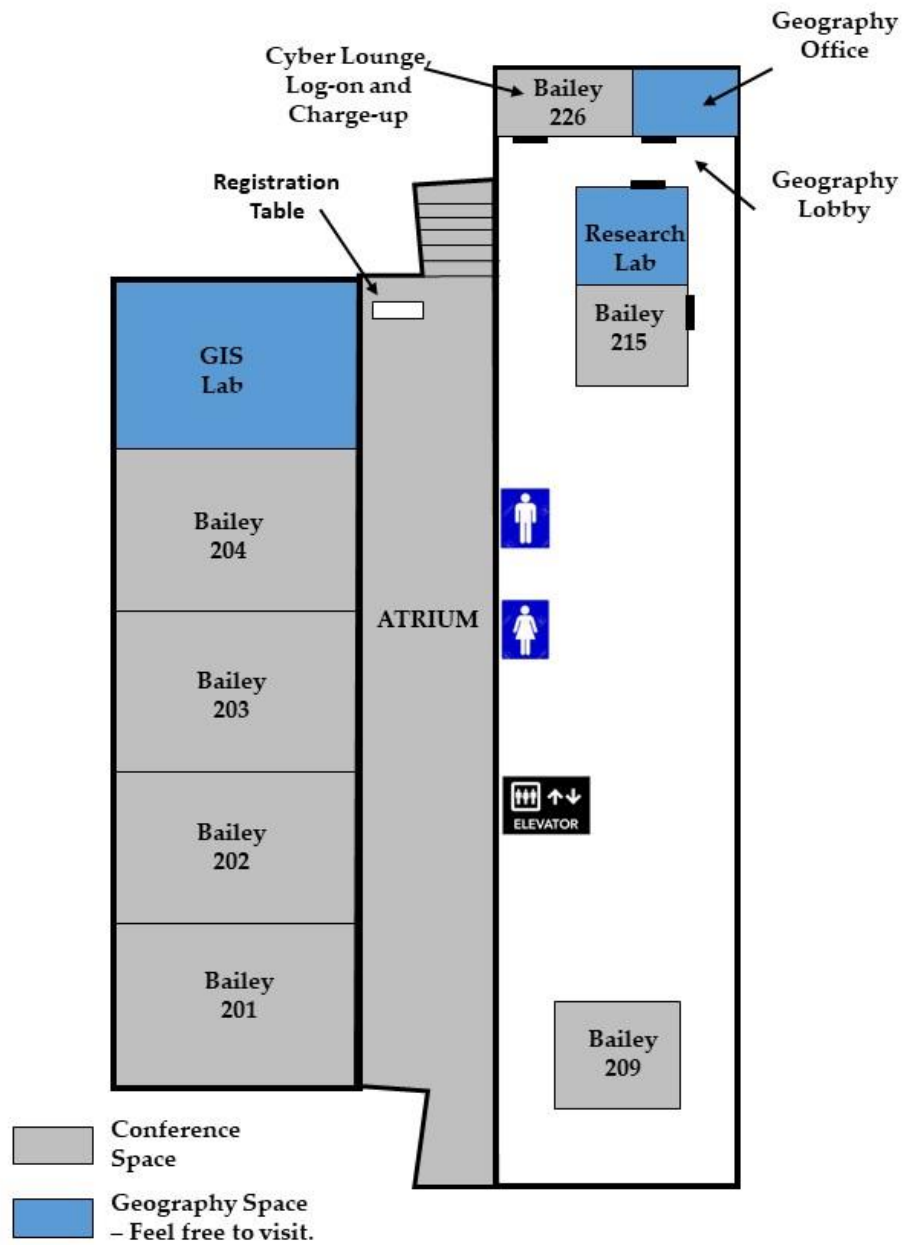
Parking Information:

- Bailey Hall is building "1" at the top center (east) on the map.
- Friday October 20 – Park in Commuter Lots I, T, and S in the lower right (northwest) of map before 4:30 pm. Note that it is a 10 minute uphill walk to Bailey Hall from these lots. After 4:30 pm all lots are opened. There is handicapped parking for attendees with hangtags in Lot L, Lot LL, and Lot W near Bailey Hall.
- Saturday October 21 – All lots are opened.

Bailey Hall First Floor



Bailey Hall Second Floor



The Meeting at a Glance

Friday October 20th

- 12:00 pm – 5:00 pm Registration, 2nd floor atrium, Bailey Hall (*see map on page 4*)
- 2:00 pm – 3:20 pm Session 1
- 3:20 pm – 4:00 pm Break, Bailey Atrium
- 4:00 pm – 5:40 pm Session 2
- 6:00 pm – 7:30 pm Dinner, Big Tree Inn (*see #1 on map on page 1*)
Welcome: Dr. James Kernan
- 7:30 pm – 9:30 pm Geography Bowl, Room 102 (*see map on page 3*)
Coordinator: Dr. Pankaj Lal
Moderator/Scorer: Dr. Jase Bernhardt
- 9:30 pm – 11:30 pm After-burn Social Gathering: Kelly's Saloon (*see #4 on map on page 1*)

Saturday October 21st

- 8:00 am – 10 am Registration, 2nd floor atrium, Bailey Hall (*see map on page 4*)
- 8:20 am – 9:40 am Session 3
- 9:20 am – 10:20 am Poster Session and Break, Bailey Atrium
- 10:20 am -12:00 pm Session 4
- 12:15 pm – 1:30 pm Awards Luncheon, Big Tree Inn (*see #1 on map on page 1*)
Introduction: Dr. James Kernan
Business Meeting: MSAAG Officers
Invitation to 2018 Meeting: Dr. Pankaj Lal
Paper & Poster Awards: Dr. Michael Davis
Keynote Address: Dr. Derek H. Alderman
- 1:45 pm – 5:00 pm Letchworth Field Trip, LL Lot behind Bailey Hall (*see map on page 2*)
- 1:45 pm – 2:45 pm *ArtWorks: Art and Geography* Exhibit, Lockhart Gallery, 26 Main Street
- 5:30 pm – 8:00 pm Social gathering and free hotdogs at Kelly's Saloon on Main Street
(*see #4 on map on page 1*)

Keynote Speaker

Derek H. Alderman

President of the American Association of Geographers

On Makin' It REAL: Engaging Geographies of Race, Memory, and Social Justice

Derek H. Alderman (dalderma@utk.edu) is Professor of Geography at the [University of Tennessee](#) and President of the American Association of Geographers (AAG). His research and teaching specialties include race, public memory, heritage tourism, critical place name study, and the African-American experience—including slavery, the Jim Crow and Civil Rights eras, and more contemporary social and spatial justice campaigns. He is the author of over 110 articles, book chapters, and other essays along with the award-winning book (with Owen Dwyer), *Civil Rights Memorials and the Geography of Memory*. Alderman is part of a multi-university team completing a [study](#) of the politics of remembering slavery at southern plantation museums and identifying places for making interventions in the historical neglect of enslaved identities and struggles. He is also engaged in a [project](#) (with Josh Inwood) that explores the role of resistant geospatial intelligence and counter-mapping within SNCC (Student Non-violent Coordinating Committee), one of the important organizations of the Civil Rights Movement in the 1960s. The National Science Foundation has funded both projects. Alderman is a strong advocate of a greater incorporation of civil rights, social justice, and critical race study within geographic education. He is the recent recipient of the Distinguished Mentor Award from the National Council for Geographic Education and the Distinguished Career Award from the Ethnic Geography Specialty Group of the AAG. As President of the AAG, Alderman is developing the “Geography is REAL (Responsive, Engaged, Advocating, and Life-Improving)” initiative, which encourages and supports greater public intellectualism, communication savviness, and disciplinary promotion. Alderman can be followed on Twitter @MLKStreet.

Friday October 20th

SESSION 1 2:00 pm – 3:20 pm

Session 1A: WEATHER AND CLIMATE

Room: Bailey Hall 201

Chair: Joan Welch, West Chester University

2:00-2:20 Tianna Andrews and Michael Davis, Kutztown University of Pennsylvania
Assessment of Mid-Atlantic Atmosphere Instability, 2003-2013

2:20-2:40 Colleen Garrity, SUNY Geneseo
Drought & Wet Spells in the Great Lakes Region

2:40-3:00 Richard Shaker, Ryerson University
Investigating Urban Heat Island through Spatial Analysis of New York City Streetscapes

3:00-3:20 Heike Hartmann, Slippery Rock University
Comparing Different Precipitation Data Sets in the Yarkand River Basin, Northwest China

Session 1B: URBAN GEOGRAPHY I

Room: Bailey Hall 203

Chair: Norah Henry, Binghamton University

2:00-2:20 Norah Henry and Lucius S. Willis, Binghamton University
Monitoring Urban Revitalization: Technology and Story Maps

2:20-2:40 Kevin Heard and John Frazier, Binghamton University
Using Story Maps as a Research Tool: Johnson City Redevelopment and the Health Sciences Campus

2:40-3:00 Jessica Gilbert and Sara Metcalf, University at Buffalo
Modeling the Social Dynamics of Community Gardens

3:00-3:20 Jennifer Rogalsky, SUNY Geneseo
Using Photographic Inquiry and Story Maps to Understand Community Assets in the Face of Gentrification in Red Hook, Brooklyn

Friday October 20th

Session 1C: SUSTAINABILITY

Room: Bailey Hall 204

Chair: Pankaj Lal, Montclair University

2:00-2:20 Sydney Oluoch, Montclair State University

Quantitative Review of Renewable Energy in sub-Saharan Africa Using Bibliometric Mapping Techniques

2:20-2:40 Angelica Greco, Colgate University

Geographical Perspectives on Nuclear Decommissioning

2:40-3:00 Julia Sickler, Montclair State University

Sustainability within the Entertainment Infrastructure in America

3:00-3:20 Erik Lyttek and Garrett Nieddu, Montclair State University

Modeling Emerald Ash Borer Spread and Timber Losses in New Jersey

Session 1D: PAPERS ON RACE AND POSTERS ON HABITAT

Room: Bailey Hall 209

Chair: Jane Read, Syracuse University

2:00-2:20 Anthony Abeja, Syracuse University

How Blackness is Represented in Professional Prizefighting (Paper)

2:20-2:40 Maxine Williams, Syracuse University

The American Television Landscape and the Representation of the Black Family (Paper)

2:40-3:20

Hamish Gibbs, Syracuse University, **Sean McCanty**, University of Massachusetts Boston, **Thomas Dimino**, University of Massachusetts Boston, and **Alan Christian**, University of Massachusetts Boston

The Effects of Reach, Buffer, and Subwatershed Scale Habitat Heterogeneity on Macroinvertebrate Assemblages (Poster)

Alexandra Logan, Syracuse University

Effect of Sea Ice Loss on the Decline of Population Sizes in Ursus Maritimus (Poster)

Friday October 20th

BREAK – BAILEY ATRIUM

3:20 pm – 4:00 pm

SESSION 2

4:00 pm – 5:40 pm

Session 2A: BIOGEOGRAPHY

Room: Bailey Hall 201

Chair: Mark Blumer, Binghamton University

4:00-4:20 Mark Blumer and Shane Tripp, Binghamton University

Fire, Ticks, and the Biogeography of Lyme Disease

4:20-4:40 Sam Heraghty, SUNY Geneseo

Evaluating and Managing Deer in Letchworth State Park

4:40-5:00 Jennifer Apple, SUNY Geneseo

Dynamic Use of Space by Slavemaking Ants

5:00-5:20 Jerry A. Griffith and Laurie Goodrich, Kutztown University of Pennsylvania

Land Cover and Farmland Raptor Distribution in Pennsylvania

Session 2B: NATURAL HAZARDS

Room: Bailey Hall 203

Chair: Jo Margaret Mano, SUNY New Paltz

4:00-4:20 Gita Bhushal Adhikary, Bernabus Wolde, and Pankaj Lal, Montclair State University

A Case Study on Impact of Flood alongside Different Community Forests in Banke, Nepal

4:20-4:40 Sean McLaughlin, West Chester University of Pennsylvania

Examining Multi-faceted Vulnerability to Natural Disasters in the Commonwealth of Pennsylvania

4:40-5:00 Gia Nguyen, Montclair State University

Item and Discriminant Analysis of Coastal Resilience Study

5:00-5:20 Qiuxi Li and Yilan Xu, University of Delaware

Economic Livelihood and Socio-cultural Transformations: Insights from Disaster Migrants in China

Friday October 20th

Session 2C: URBAN GEOGRAPHY II

Room: Bailey Hall 101

Chair: Seth Cavello, University at Buffalo

4:00-4:20 Seth Cavello, University at Buffalo

Bonding and Bridging Social Capital: The Experience of Burmese Refugees in Buffalo, New York

4:20-4:40 Jason Knight, SUNY Buffalo State, and **Russell Weaver**, Texas State University

Measuring and Mapping Urban Shrinkage in the United States

4:40-5:00 Megan Heckert and Christina Rosan, West Chester University and Temple University

Planning for Equity in Green Stormwater Infrastructure Development

5:00-5:20 Jessica Miller, Montclair State University

Inclusion and Exclusion in Environmental Decision Making

5:20-5:40 Todd Sundberg, University of Delaware

At the Intersection of Urban Agriculture and Social Justice Activism in Wilmington, Delaware: Practices and Perceptions

Session 2D: HISTORICAL GEOGRAPHY AND LANDSCAPE CHANGE

Room: Bailey Hall 209

Chair: Paul Marr, Shippensburg University

4:00-4:20 Paul Marr and Claire Jantz, Shippensburg University

What Surface Artifacts Can Tell Us about Abandoned Chilean Nitrate Plants

4:20-4:40 Noah Haber, SUNY Geneseo, **Jennifer Ramsay**, SUNY Brockport, and **James Kernan**, SUNY Geneseo

Comparing Agricultural Hinterlands in Urban and Rural Sites in Arid Environments using Archaeobotanical Data and GIS Analysis

4:40-5:00 David Robertson, SUNY Geneseo, **Chris Larsen**, University at Buffalo, and **Steve Tulowiecki**, SUNY Geneseo

Cultural and Ecological Histories of the Big Tree to 1857

Friday October 20th

5:00-5:20 Stephen Tulowiecki, SUNY Geneseo

Can Information Retrieval Approaches Be Applied to Extract Historical Landscape Descriptions from Unstructured Text in Eastern North America?

Session 2E: UNDERGRADUATE LIGHTNING TALKS

Room: Bailey Hall 215

Chair: TBD

4:00-5:40

Jacob Baumohl, Temple University

Gentrification in Coastal and other Non-Urban Communities

Jillian Eller, Temple University

Liquor Store Locations in Philadelphia, Pennsylvania and Their Relation to Violent Crime Based on Seasonality

Joseph Gallagher, Temple University

Cod-motity Fetish: British Fishers, Place and Brexit

Kristen Homeyer, SUNY Geneseo

Grassland Management in Caumsett State Park

Shannon Keane, SUNY Geneseo

Ecotheology in the South Pacific

Maric Kusinitz, Temple University

Geographies of Sacred Space: A Meditative Exercise

Veronica Medina, SUNY Geneseo

GIS Analysis: Indiana Brown Bat

Ritapa Neogi, Temple University

Colonialism and the Ecological Crisis of the Suez Canal

Chelsea Williams, Temple University

Neoliberal Food Deserts

Friday October 20th

**6:00 pm
Dinner
Big Tree Inn**

**7:30-9:30 pm
Geography Bowl
Bailey Hall 102**

**9:30-11:00 pm
After-burn Social Gathering
Kelly's Saloon**

Saturday October 21st

SESSION 3 8:20 am – 9:40 am

Session 3A: POPULAR CULTURE

Room: Bailey Hall 201

Chair: Michael Davis, Kutztown University of Pennsylvania

8:20-8:40 Michael Davis, Kutztown University of Pennsylvania

Environmental Themes in Video Games: Then vs Now

8:40-9:00 Mark Rhodes, Kent State University

The Peekskill Riots: Landscapes of Performance and Performances of Landscape

Session 3B: CULTURAL GEOGRAPHY – TOWNS AND TOURISM

Room: Bailey Hall 202

Chair: Jennifer Mapes, Kent State University

8:20-8:40 Jennifer Mapes, Kent State University

Small Towns in the News: An Analysis of U.S. Media Coverage 2006-2016

8:40-9:00 Christopher Willer and Jennifer Mapes, Kent State University

Using Urban Clusters to Identify and Track Change in Small Towns

9:00-9:20 Meghann Smith, Montclair State University

Assessment of Hard Apple Cider Tourism Potential in the Hudson Valley Region

9:20-9:40 Ola Johansson, University of Pittsburgh at Johnstown

Sights, Sounds, and Chickens in Ybor City

Saturday October 21st

Session 3C: MEDICAL AND CRIME GEOGRAPHIES

Room: Bailey Hall 203

Chair: Elizabeth Dzwonczyk, United States Military Academy

8:20-8:40 Elizabeth Dzwonczyk, United States Military Academy

Clusters of Nonmedical Exemptions to Vaccination in Illinois K-12 Schools

8:40-9:00 Qiuyi Zhang, Mary Northridge, Stella Yi, and Sara Metcalf, SUNY Buffalo

Modeling Social Factors to Promote Oral Health Equity

9:00-9:20 Jessica Kathe, SUNY New Paltz

Cross-Country-Tripping: The Origins and Spatial Distributions of Drugs in the U.S.

9:20-9:40 Mario L. Cardozo, Kutztown University of Pennsylvania

Geo-tagged Vandalism: Ethics of Web-mapping Graffiti

Session 3D: POLITICAL GEOGRAPHY

Room: Bailey Hall 204

Chair: Darrell Norris, SUNY Geneseo

8:20-8:40 Darrell A. Norris, SUNY Geneseo

Trump and Circumstance: Electoral Reflections in Rural Nebraska

8:40-9:00 Li Tong, SUNY Buffalo

Mapping Large Event Sentiment Clusters by Integrating Twitter with a Remote Sensing Approach

9:00-9:20 Thomas Narin, University at Albany

The Appeal of Chinese State Capitalism in Latin America

9:20-9:40 Kathryn Hannum, Kent State University

The Transnational Commemoration of Alfonso R. Castelao

POSTER SESSION AND BREAK

9:20 am – 10:20 am

Bailey Atrium

Pick up a ballot at Registration Table to vote in the Poster Competition!

Abstracts on pages 34-45

Saturday October 21st

SESSION 4 10:20 am – 12:00 pm

Session 4A: GEOGRAPHY EDUCATION

Room: Bailey Hall 201

Chair: Heidi Lannon, Santa Fe College

10:20-10:40 Heidi Lannon, Santa Fe College

Geoscience Engagement and Outreach - Recruitment and Retention Challenges

10:40-11:00 Carlos Alberto Morales-Ramirez, National University of Singapore

Cartographic Vexillology of North America: Exploring Maps in Subnational Flags as a Tool to Teach the Theme of Location

11:00-11:20 Chuck Yeager, SUNY Suffolk, **Jonathan Marks**, Bellarmine University, **Jay D. Gatrell**, Eastern Illinois University, and **Jeremy Bennett**, Indiana State University & Evansville Day School

The Institutional Determinants of Internationalization: The Cases of Study Abroad Participation and International Student Enrollment

Session 4B: WATER RESOURCES AND LAND USE

Room: Bailey Hall 202

Chair: Claire Jantz, Shippensburg University

10:20-10:40 Claire Jantz, **Scott Drzyzga**, **Peter Claggett**, **Yáñez Morillo**, **Antonia Price**, **Joshua Barth**, **Dorlisa Minnick**, and **Caitlin Lucas**, Shippensburg University

DRB 2070: Lessons Learned from Basin-wide Land Use Change Forecasting

10:40-11:00 Taylor Wiczerak, Montclair State University

Willingness to Pay for Green Infrastructure in Response to CSO Activity in Elizabeth, NJ

11:00-11:20 Mehmet Altingoz, **Suren Gevinian**, **Melissa McCracken** and **Aaron T. Wolf**, University of Delaware

The Cooperative Management of the Arpacay/Akhuryan Dam Between Conflicting Neighbors Armenia and Turkey

Saturday October 21st

Session 4C: SERVICE-LEARNING IN NEW ORLEANS PANEL

Room: Bailey Hall 203

Chair: Wendy Lascell, SUNY Oneonta

10:20-12:00 Wendy Lascell, SUNY Oneonta

Grassroots-action building resiliency in New Orleans after Hurricane Katrina: Service-Learning experiences in a Disaster Geographies course.

Session 4D: STAND ALONE GEOGRAPHERS (SAGE) PANEL

Room: Bailey Hall 204

Chair: Leonard Pyzynski, Onondaga Community College

10:20-12:00 Leonard Pyzynski, Onondaga Community College

Stand Alone Geographers (SAGE)

Paper Abstracts

Anthony Abeja, Syracuse University. *How Blackness is Represented in Professional Prizefighting*. This research paper explores how contemporary media representations of black professional boxers reinforce racial stereotypes, especially those about naturally superior black physicality and violence. Because boxing is an inherently violent sport, it can be difficult to decode racist media discourse, especially in a supposedly “post-racial” society such as the United States. I will defend this argument first by explaining past media discourse on Muhammad Ali, one of the world’s most prominent athletes, who, during a contentious period in the United States, was subject to much critical attention. Then, a analysis of the portrayal of Floyd Mayweather, Jr. in two contemporary promotional boxing documentaries will root this argument in a modern-day example. Finally, within that analysis, I will explain how the America’s racial landscape has changed in the time between each of the fighters’ careers, as well as how to distinguish normal promotional tactics in boxing from racist media discourse by using critical race theory as a foundational basis.

Mehmet Altingoz, Suren Gevinian, Melissa McCracken and Aaron T. Wolf, University of Delaware. *The Cooperative Management of the Arpacay/Akhuryan Dam Between Conflicting Neighbors Armenia and Turkey*. The Union of Soviet Socialist Republics (USSR) and Turkey signed numerous cooperative agreements regarding the management of their border rivers and transboundary water bodies. As an outcome of their cooperation, in 1983, they jointly constructed a dam on the boundary Arpacay/Akhuryan River. They equally shared the water in the dam and primarily utilized it for irrigation, fishing, and domestic purposes. In 1991, the USSR dissolved and the dam geographically fell between Armenia and Turkey. Armenians and Turks have a history of grievances and tensions and they have no formal diplomatic relations. However, the cooperation over the dam continued at the same level, if not more, since then. This study* sought to answer how this cooperation has been sustained and how this kind of cooperation can be incorporated in similar cases. In order to pursue answers to these questions, secondary sources were reviewed and anonymous Armenian and Turkish authorities were interviewed. This research revealed that the main reasons for cooperation are that the joint committees that manage the dam are comprised of local authorities and they are keeping the management politics-free and low key. First, this study presents a brief description of the regulatory and institutional frameworks that govern the management of the Arpacay/Akhuryan Dam. Second, it analyzes the current implementation of these frameworks and discusses the effectiveness of the joint management. Finally, it derives lessons from the cooperative joint management.*This study, originally a report, is a component of the World Bank’s project ‘Retooling Operations with Transboundary Impact’, which aims to identify mechanisms that have been effective at promoting coordination between riparian states that reduce transboundary harm, and utilize the benefits of investments in basins.

Tianna Andrews and Michael Davis, Kutztown University of Pennsylvania. *Assessment of Mid-Atlantic Atmosphere Instability, 2003-2013*. Atmospheric instability is an indication of how unstable the atmosphere is at a given time. Depending on certain conditions, such as moisture content and temperature, the instability of the atmosphere can change potentially altering convection rates. Generally, an unstable atmosphere often indicates more variability in the weather (such as storms and other types of severe weather). Variables that affect the instability of the atmosphere include air temperature, specific humidity, and convective available potential energy (CAPE), which indicates the maximum energy available from an ascending air parcel. Cloud top pressure can be used to assess changes in the height of the deep convective anvils. These atmospheric variables were gathered from the Earth Systems Research Lab (ESRL), which is a part of the National Center of Atmospheric Research (NCAR) on a monthly

period. The climate data was then partitioned into seasonal data and the summer (June-July-August) seasons from 2003 to 2013 for the Mid-Atlantic region of the United States were analyzed. By plotting this data in the IDL computer programming code, assessment into the trends of these atmospheric variables can cultivate a greater understanding of changes in atmospheric stability from 2003 to 2013.

Jennifer Apple, SUNY Geneseo. *Dynamic Use of Space by Slavemaking Ants*. Among the most unusual of the many interspecific interactions affecting ant populations is the phenomenon of specialized slavemaking behavior. Slavemaking ants raid colonies of their host species and bring back brood to become a work force in their own nests. The captured brood mature in the slavemaker colony, where the enslaved workers care for slavemaker offspring, maintain the nest, and forage for food. In an 8-hectare patch of forest on the SUNY Geneseo campus in western New York, two species of slavemaking ants, *Formica subintegra* and *F. pergandei*, both parasitize a locally abundant mound-nesting ant species, *F. glacialis*. Since 2008, in this site over 1000 nest locations of *F. glacialis* have been mapped, with approximately half of these nests representing currently active colonies. Over a 7-year-period, the raiding activity of 10-14 colonies of the slavemaking species has been monitored to determine the frequency and distance of raids and the identity of the host nests targeted. Long-term monitoring of slavemaking colonies suggests constraints on meeting their demand for host brood, despite the high density of *F. glacialis* nests. Slavemaking colonies exhibited frequent relocation: of 14 colonies tracked for at least three of seven years, all but one has moved at least once by invading existing host nests. Nine colonies have moved at least three seasons over this period. Occasionally slavemaking ant colonies split to occupy several host nests. When defined based on observed raids and nest relocations, the territories of individual slavemaking ant colonies have shifted considerably over time. Combining the space exploited over a 6-year-period reveals that these colonies have exploited a substantial proportion of available space in this site. These data suggest that despite the constraints of their parasitic lifestyle, slavemaking ants are able to meet their demands for captive labor through their flexible and dynamic use of space.

Gita Bhushal Adhikary, Bernabus Wolde, and Pankaj Lal, Montclair State University. *A case study on Impact of Flood alongside different community forests in Banke, Nepal*. The problems of flooding and inundation in the Terai region of Nepal are of critical concern due to changes in climate and rainfall pattern/intensity. In August 2014, torrential rains caused heavy floods and landslides in 23 districts throughout Nepal, with particularly devastating impact in the Banke district. The Rapti River flows through the heart of Banke district and therefore increases the flood risk for many of its villages. To understand the risk faced by the individuals and responses they have taken, we carried out a study in the flood affected villages of Gangapur, Phattepur, and Matehiya within the Banke district. The main objective was to analyze the cause behind the flood incidence, peoples' strategies to deal with the flood, and possible mitigation measures. A community-based field survey was carried out in 443 randomly selected households in the affected villages. The results showed that all households surveyed were affected by the 2014 flood. The survey revealed that people in these villages are living with the threat of flood daily as monsoons approach. 93% of respondents support constructing a dam alongside the Rapti River bank. 11.28% of respondents believed village relocation could solve the problem, while 6.09% believe the removal of the Laxmanpur dam near the Nepal-India border will solve the problem. This study reveals that 89.16% of total respondents are still in emotional trauma due to the 2014 flood. This study urges the Government of Nepal, NGOs/INGOs, and concerned agencies to focus on the flood issues in these areas. Keywords: Flood, Terai, Rapti River, Banke, Nepal

Mark Blumler and Shane Tripp, Binghamton University. *Fire, Ticks, and the Biogeography of Lyme Disease*. Lyme disease is a severe and growing problem, and one for which the public health response is entirely inadequate. Most scientific research has treated lyme and the ticks that carry it as in equilibrium with

environment. But, as Blumler (2003) demonstrated, they are spreading geographically. In effect, the deer tick is a native “invading species”. Historically (and pre-historically) fire was employed to control tick numbers, and probably constrained tick dispersal as well. In this presentation, we document and model patterns of spread of the ticks and the disease at various spatial scales. We also present results of a pilot study on the effects of prescribed fire on tick densities on Pennsylvania Game Lands near State College. These data suggest that fire indeed reduces tick density, and therefore potentially the incidence of Lyme disease.

Mario L. Cardozo, Kutztown University of Pennsylvania. *Geo-tagged Vandalism: Ethics of Web-mapping Graffiti*. The study of crime normally attends to particular ethical considerations. When intending to study illicit activities, researchers often request institutional approval to work with human subjects and procure consent from participants, assuring their anonymity will be maintained in future reports. In geographic research involving crimes, protecting anonymity in consent protocols often translates into aggregating data at different geographic levels and concealing names and coordinates of locations so that individuals/communities engaging in particular illegal activities cannot be identified. By contrast, I argue that the perpetrators of protest graffiti inherently “give consent” to others to report on the location and content of their form of vandalism. Graffiti writers normally paint over publically accessible surfaces in order to increase visibility of their message or to target particular landscape features. With a case study on the recent proliferation of protest graffiti in downtown Asuncion, Paraguay, I illustrate how reporting on graffiti with photos and explicit locational attributes via a Google Maps application could both hinder and benefit the work of graffiti writers. In this context, I relate instances in which graffiti-writing has been penalized in Paraguay even if this vandalism could be linked to positive political change. I also discuss the issue in light of recent controversies about sharing geo-tagged pictures or location-specific electronic communication on the internet, which have prompted certain social media platforms to conceal the geographic information of such types of posts when providing data to researchers.

Seth Cavallo, University at Buffalo. *Bonding and Bridging Social Capital: The Experience of Burmese Refugees in Buffalo, New York*. The resettlement experience of refugees in the United States has been given much attention in national and international media, which makes it critical to understand this experience. Social capital defined here: as the opportunities that arise from social networks of trust and reciprocity, is a valuable framework for the analysis of immigrant communities. Two types of social capital, bridging and bonding, have been identified and are examined for their influence on livelihood and housing outcomes in the Burmese refugee community of Buffalo, New York. While there are numerous studies that examine the use of social capital by voluntary migrants, only a few have examined the use of social capital by refugees, particularly with regard to subnational differences such as ethnicity and religious affiliation. A key aspect of understanding the challenges faced by refugees who are using social capital for housing and livelihood strategies is the shifting characteristics of the neighborhoods in which they settle. This study asks the following specific research question: how do changes in neighborhood characteristics over time affect the resettlement experience of Burmese refugees. Analysis of census variables related to livelihood and housing outcomes, including housing costs, crime rates, educational attainment, and economic indicators, will be used in combination with interviews of key actors and refugees, to answer this question. Results indicate that significant change has occurred in the neighborhoods of settlement, so Burmese refugees will have to adapt and change either use of social capital for housing and livelihood strategies. Overall, this study will contribute to the use of social capital as a framework for gaining insight into how forced migrants are able to create networks of trust and reciprocity in a new place.

Michael Davis, Kutztown University of Pennsylvania. *Environmental Themes in Video Games: Then vs Now*. The video games of the early 1990s have an appreciable depth of environmental tones that seem

prophetic by today's standards as climate change and environmental degradation have emerged as significant topics of scientific and geographic inquiry. The political and cultural environment of the late 1980s and early 1990s played a significant role in the development of environmentally-minded video games. Since the 20th century, the depiction of these environmental themes have changed with a greater understanding of environmental science literature, have incorporated educational qualities to gameplay, and have migrated from large video game developers (e.g., Sega and Nintendo) to independent developers (e.g., thatgamecompany and Plethora Project). An overview of the evolution of environmental themes in video games will be presented by examining individual games along with trends in the video game industry.

Elizabeth Dzwonczyk, United States Military Academy. *Clusters of Nonmedical Exemptions to Vaccination in Illinois K-12 Schools*. Vaccination rates in Illinois K-12 schools are decreasing as more parents opt for nonmedical exemptions (NME). At the local scale, higher levels of exemptions impact herd immunity levels and can be a cause of public health concern. Few studies have previously conducted or proposed methods to conduct spatial and temporal cluster pattern analysis at the local scale. Methods: This study utilizes vaccination exemption data from Illinois School Board of Education's annual Immunization School Survey for the 2003-2004 and 2013-2014 academic years. To identify hot and cold spots, the Getis-Ord Gi* statistic was used with two different parameter models. Results: The Getis-Ord General G statistical test identified that vaccination exemptions are highly clustered in Illinois schools. The Getis-Ord Gi* test identified hot and cold spots primarily in high population density areas for 2003-2004 with hot spots spreading to lower population density areas for 2013-2014. More clusters of high and low NMEs were identified for the 2013-2014 academic year than for the 2003- 2004 academic year. The percentages of schools that were neither hot nor cold averaged 94.0% for the 2003-2004 school year and 78.7% for the 2013- 2014 school year. Conclusions: This study proposes methods to identify clusters of statistically significant NME rates. Identification of NME hot spots can be beneficial in locating areas that are below the herd immunity threshold. Nonmedical vaccination exemption rates in Illinois are rising and the increase in hot and cold spots is evidence that the polarity of vaccination choice is growing.

Colleen Garrity, SUNY Geneseo. *Drought & Wet Spells in the Great Lakes Region*. As Earth's global average temperature continues to increase, impacts on the hydrological cycle are expected to change. Climate model simulations commonly project that the Great Lakes region will become warmer and wetter through the end of the 21st century. This research investigates the recent climatology of both drought and wet spells for the U.S. portion of the Great Lakes region. The frequency and trends of these drought and wet spells are summarized using monthly Palmer Drought Severity Index data for 28 climate divisions in the Great Lakes region for the period 1948-2016. The presentation includes a summary for the period of record as well as a decadal breakdown of the data for all climate divisions. The results are further analyzed according to severity of drought and wet spells for each climate division.

Jessica Gilbert and Sara Metcalf, University at Buffalo. *Modeling the Social Dynamics of Community Gardens*. While community gardens are often created in urban areas in order to augment food access, they play an important role in the social fabrics of neighborhoods, as well. Specifically, they serve as spaces of community engagement, learning, and refuge, particularly in underserved neighborhoods. Buffalo, NY, as one of the most impoverished cities in the United States, has become home to about 200 community gardens. Understanding the motivations that inspire the creation of and participation in these gardens is imperative to understanding the impacts that they have upon their neighborhoods. Interactions with various urban gardeners in the West Side have indicated that residents decide to garden in order to bring the community closer together and make their neighborhoods safer. The gardeners agreed that since the creation of their gardens, crime has significantly decreased, residents' emotional investment in their

neighborhoods has increased, and inhabitants have since developed relationships with the majority of people in their communities. Using the information gathered from these encounters, this research models the impacts that urban gardens have upon the social networks of the neighborhoods in which they are located. This agent-based model simulates social networks throughout the progression of the gardens, from before they were created until their present mature stage, and tracks the social ties that develop as the gardens grow. In doing so, this research seeks to understand the social benefits of community gardens.

Angelica Greco, Colgate University. *Geographical Perspectives on Nuclear Decommissioning*. Nuclear power plants in the United States today face an uncertain future. An increasing number of plants are shutting down before their licenses expire, leaving host communities struggling to cope with the unexpected change. Yet few studies to date have articulated how power emerges in decommissioning decisions, especially from geographical perspectives. This case study investigates two nuclear power plants with divergent decommissioning outcomes: the James A. FitzPatrick Nuclear Power Plant in Scriba, New York, which was not decommissioned, and the Vermont Yankee Nuclear Power Station in Vernon, Vermont, which began decommissioning in 2014. This study draws on the work of Rick Eckstein (1997), a case study on the commissioning of two nuclear power plants in Shoreham, New York and Seabrook, New Hampshire, which asserts that the strength of “growth coalitions,” defined as the unofficial, growth-oriented alliances that form between government and business, is an important determinant of plant commissioning. Our study investigates whether Eckstein’s key insights hold in recent nuclear decommissioning episodes in the northeastern United States, and when geographical perspectives are more fully adopted. We analyzed existing accounts, news articles, government documents, and interviews that we conducted with 26 stakeholders, including state and county officials, reporters, grassroots activists, and community members. We concur with Eckstein in that local grassroots movements and residents’ voices exerted a limited role in decommissioning decisions. However, rather than attributing the power to the strength of “growth coalitions,” we argue that decommissioning decisions were critically influenced by cross-scalar interactions informed by the global sustainability discourse and historically formed state-scale energy economy, and by intra-state politics as the result of variegated geographies of nuclear power in each state.

Jerry A. Griffith and Laurie Goodrich, Kutztown University of Pennsylvania. *Land Cover and Farmland Raptor Distribution in Pennsylvania*. We examined presence and abundance of two grassland raptors, northern harrier and short-eared owl, with respect to land use/land cover in Pennsylvania. Grassland raptors have declined in abundance in Pennsylvania as their farmland and grassland habitat has diminished. We used locational data derived from citizen science datasets to characterize land use/land cover conditions where the birds were observed. Locational data were obtained from the eBird database and the Pennsylvania Farmland Raptor Project for 2013-2015. Both these programs allow experienced birders to upload their bird sighting data and locations into a database. Overlaying these data onto the US Geological Survey’s 2011 National Land Cover Dataset in a GIS, we extracted land cover proportions within 1- and 5-km buffers of the sightings. We examined land cover where single birds were observed, but also stratified the data by sites of high use (suggesting better habitat conditions) or low use, and also by breeding and wintering observations. Results show significant differences in the land cover composition among the stratifications. For northern harrier, higher amounts of cropland and grassland were found in high-use sites compared to low-use sites. The amount of developed land was significantly lower around high-use sites for Harrier in 1-km buffers compared to low-use sites. Wintering observations of Northern Harrier also had significantly higher amounts of grassland+cropland than did breeding sites within both 1- and 5-km buffers. For Short-eared Owl, there was significantly (or near significantly) more grassland+cropland around high-use sites for both 1- and 5-km buffers. Short-eared

Owl still had very large amounts of grassland and cropland around their sighting locations, even more than Northern Harrier, – 72.4% and 56.2% at high-use sites in 1- and 5-km buffers, respectively. Results suggest conservation programs for these two grassland species should focus on clustering grassland cover and preserve farmland in larger landscapes.

Noah Haber, SUNY Geneseo, **Jennifer Ramsay**, SUNY Brockport, and **James Kernan**, SUNY Geneseo. *Comparing Agricultural Hinterlands in Urban and Rural Sites in Arid Environments using Archaeobotanical Data and GIS Analysis*. Does size matter? Archaeological studies concerning the size of agricultural hinterland in antiquity have generally been conducted on sites with favorable climates and have become the standard comparative tool. However, little has been examined relating to the size of hinterlands in arid environments even when there is excellent archaeological evidence for extensive agricultural production, as seen in southern Jordan and Israel during the Roman and Byzantine periods. Likewise, a disproportionate focus has been placed upon urban settlements in archaeological research and as a result. The knowledge we possess of rural hinterlands and their contributions to the agrarian economy of the overall region is largely unknown and under-studied. Identifying the type and scale of agricultural productivity in arid environments between urban centers and their respective hinterlands can be examined using botanical remains overlaid with spatially variant environmental attributes. The use of geographic information systems (GIS) can make the complicated process of analyzing the nature and composition of botanicals according to environmental conditions readily possible. Applications of GIS utilized morphological qualities of the landscape such as precipitation, elevation, slope, and organic carbon content aid in gaining a better understanding of the relationship between a settlement and its hinterland. Preliminary results of this study provide an example of how GIS can aid in analyzing the relationship between settlements and hinterlands in antiquity by comparing plant communities and the corresponding essential environmental parameters they were located within.

Kathryn Hannum, Kent State University. *The Transnational Commemoration of Alfonso R. Castelao*. Alfonso Rodríguez Castelao (1886-1950) was a Galician politician, author, artist, and philosopher, now widely considered to be the father of the Galician nationalist movement, and a man who is purposefully memorialized in the landscape of several nations. Castelao's articulation of a Galician identity as something other than Spanish helped to propel the Galician national movement forward in the aftermath of the Spanish Civil War. Through his writing of the influential text *Sempre en Galiza* (1944), essays for the Galician republican journal *A Nosa Terra*, and other Spanish and Galician publications, Castelao unified Galicians, Galician exiles, and Galician emigrants into one trans-national Galician nation. This paper analyzes Castelao on the toponymic memorial landscape and utilizes methods of scaling commemorative place names to produce a transnational memorial geography of Castelao. Analyzing the spatial distribution and scaling of memorials dedicated to Castelao reveals two things: the strong transnational connections between Galicia and its Argentinian diaspora and the utilization of Castelao to satisfy national narratives within Spain. Analysis of the toponymic memorials to Castelao in Spain and Argentina suggests that Castelao's presence as a memorial entity is dependent upon the political leaning of the Spanish locale in question and unites Galician diasporic communities through a solidification of a national hero abroad. Key Words: Memorial Landscape, Toponymic Landscape, Spain Argentina.

Heike Hartmann, Slippery Rock University. *Comparing Different Precipitation Data Sets in the Yarkand River Basin, Northwest China*. Since the 1950s, the population in the arid to hyperarid Tarim River basin has grown rapidly. Although surface water is a scarce resource, coming primarily from mountains surrounding the basin, farmers continually require river water for irrigation. A doubling of the agricultural land area from 1989 to 2011 has been associated with rising agricultural water consumption. The availability of accurate precipitation data in the mountains is crucial for applying

hydrologic models and estimating the amount of surface water available for irrigation and other purposes. Unfortunately, climate stations are predominantly located in the lowlands or in the valleys of the mountainous regions where access is easy and very few climate stations are present in higher elevations leading to a high uncertainty of climate information. In this presentation, the global station-based precipitation datasets GPCC V7 and CRU TS 4.01 are compared with 3B43 TRMM multisatellite precipitation data and station data from the China Meteorological Administration in the Yarkand River basin, a headstream of the Tarim River. In terms of spatial differences it is obvious that the satellite based 3B43 TRMM product shows higher annual precipitation totals in the high mountains than the global station-based precipitation datasets and the station data. The temporal variability of monthly average-basin precipitation is similar in all data sets except CRU TS 4.01. CRU TS 4.01 has several strong peaks, which are not apparent in the others.

Kevin Heard and John Frazier, Binghamton University. *Using Story Maps as a Research Tool: Johnson City Redevelopment and the Health Sciences Campus*. Here at Binghamton University, we are developing a Story Map that will track the neighborhood changes that are occurring surrounding the newly built School of Pharmacy and the relocation of the School of Nursing. Our GIS Facility and Geography Department are working closely with the University President and other key officials, who have bought into the technology. We have Faculty, Staff, Graduate and Undergraduate students involved with various aspects of the project. The neighborhood where the school is being built is currently struggling with crime, vacant properties, and poverty. We believe gentrification will occur in this area and want to track both the good and bad effects of these processes. The Story Map includes an overview of the project, construction updates, video narratives from key people, history of the site/neighborhood, thematic mapping (demographic, parcel and crime), video fieldwork, and drone surveys. We will be able to track changes by looking at the same datasets over time.

Megan Heckert and Christina Rosan, West Chester University and Temple University. *Planning for Equity in Green Stormwater Infrastructure Development*. The hope for Philadelphia is that a policy that promotes urban greening, Green City, Clean Waters, will solve many urban challenges at once. Green Infrastructure (GI) placement across the city has the potential to help capture stormwater to reduce Combined Sewage Overflow (CSO) events. It also has been shown to increase social, economic, and environmental benefits. As a part of its Green City, Clean Waters plan, the Philadelphia Water Department is partnering with businesses, non-profits, citizens, schools, and other City agencies to promote green infrastructure investment across the City. However, as the program gets rolled out in Philadelphia, we are recognizing the need for a more systematic focus on equity in planning for green infrastructure implementation and urban greening more generally. This paper expands on previous research by Heckert and Rosan (2016) developing a Green Infrastructure Equity Index to examine ways in which the Index could be used in conjunction with other decision-support tools such as StormWISE (McGarity 2012) to help community stakeholders make more informed decisions about GI investment and community greening. Using the Overbrook neighborhood in West Philadelphia as a pilot study, the research tests a methodology for GI planning that focuses on more systematically using GI and urban greening to address community needs, environmental justice, and promote equity. Heckert, M. and C.D. Rosan. (2016). Developing a green infrastructure equity index to promote equity planning. *Urban Forestry and Urban Greening*, 19: 263-270. McGarity, A.E. (2012). Storm-Water Investment Strategy Evaluation Model for Impaired Urban Watersheds. *Journal of Water Resources Planning and Management*. 138(2): 111-124.

Norah Henry and Lucius S. Willis, Binghamton University. *Monitoring Urban Revitalization: Technology and Story Maps*. This presentation continues the use of ESRI's "Story Maps" to provide initial and follow-

up monitoring of NYS-funded projects in the Southern Tier of New York, including a major project in the small city of Johnson City (see also Heard and Frazier presentation, 2017, Middle States). The Johnson City Revitalization Project involves major financial investments by New York State and by Binghamton University to create a Health Sciences Campus in the center of one of the poorest areas in Upstate New York, the Village of Johnson City. The specific Health Sciences project includes the redevelopment of a 16-acre zone, with an expanded impact throughout the neighboring commercial, residential and recreational areas of The Village. This presentation explains the uses of several geo-technologies -- spatial viewing, GIS and UAV (drone flights) of these changing landscapes of Johnson City – to monitor, update and map the investment zone, employing local data bases and field work in the creation of records for documenting changing cultural landscapes. We emphasize the importance of baseline and sequential spatial viewing and drone applications.

Sam Heraghty, SUNY Geneseo & Letchworth State Park. *Evaluating and Managing Deer in Letchworth State Park*. Letchworth State Park is a large ecologically significant state park located in the Genesee Valley in Western New York. The southern portion of the park has had a history of no hunting which led to a severe problem with deer overpopulation in this part of the park. Deer management efforts were launched by the park in 2009 and preliminary surveys indicated there were approximately 90 deer per square mile in this part of the park. A key part of this management effort was the creation of a series of vegetation monitoring plots, to establish the severity of damage caused to the ecosystem by deer over browsing. This paper seeks to explore the success of deer management efforts to this point by looking at differences between these vegetation plots as well as using several other methods of estimating population size in the park. Furthermore, the study proposes further action that could be taken to better understand the population dynamics of the deer herd in the park and potentially better manage the herd.

Claire Jantz, Scott Drzyzga, Peter Claggett, Yáñez Morillo, Antonia Price, Joshua Barth, Dorlisa Minnick, and Caitlin Lucas, Shippensburg University. *DRB 2070: Lessons Learned from Basin-wide Land Use Change Forecasting*. This paper provides an overview of a recently completed project to forecast urban land use change to the year 2070 within the Delaware River Basin, a major river basin located on the densely populated East Coast of the United States. Among other ecosystem services, the DRB provides drinking water to the major East Coast cities of Philadelphia and New York. With urbanization pressure in the southern part of the DRB, and recreational and energy infrastructure development in the north, drivers of land use change are heterogenous and, in some cases, contentious. We engaged with dozens of governmental and non-governmental stakeholders, end-users, and scientists across the DRB to analyze historic land use and socio-economic change trends, gather quantitative forecast data, and develop narratives for future land use and socio-economic trajectories. We present an overview and focus on some of the key lessons learned from this effort: 1) Broad stakeholder engagement represents a critical investment of time and resources that pays off in terms of model development, dissemination, and adoption; 2) Given the short time frame of this 2.5-year study, taking an informed “triage” approach was necessary and comes with both costs and benefits; 3) For experts and non-experts alike, imagining a future more than 30 years out is a difficult but necessary challenge.

Ola Johansson, University of Pittsburgh at Johnstown. *Sights, Sounds, and Chickens in Ybor City*. Visitors to the Ybor City neighborhood in Tampa, Florida—which is the city’s premier entertainment district—are likely to notice an abundance of free ranging chickens. Some are kept by the residents in the neighborhood, but most are feral birds that have thrived in the warm-year-around climate and patches of green spaces around Ybor City. The prevalence of chickens is not only tolerated but actively encouraged by city ordinance and neighborhood organizations. The reason, I argue, is to add visual and aural quality to the visitor experience. Tourists frequently engage with the chickens in the streets and even if chickens

are not directly visible, the crowing of roosters permeates the neighborhood's soundscape. As the history of Ybor City is associated with Cuban immigrants, the image of roaming urban chickens is perceived as a tradition of exoticized others in general, and Cubans in particular. To explore this phenomenon I mapped the geography of sights and sounds of chickens throughout Ybor City. I also conducted brief interviews with tourists to gauge how the presence of chickens affected their visitor experience.

Jessica Kathe, SUNY New Paltz. *Cross-Country-Tripping: The Origins and Spatial Distributions of Drugs in the U.S.* "Cross-Country-Tripping: The Origins and Spatial Distributions of Drugs in the U.S" briefly summarizes a history of drug use in the United States, shedding light on the journey from the point where each substance was discovered, to the point of prevention or tolerance. Each common illicit drug of today has undergone a geographic pilgrimage in some sense by location, catalyzed by culture and historical events. The origins of morphine were solely pharmaceutical, released to the public by the well-known Bayer company. LSD was sought out by the U.S. government in hopes to be used by police services as a "truth drug" to urge criminals to confess their crimes. And of course, the medical use of marijuana has seen an interesting course of recent events in its potential legalization: a byproduct of many unseen geographic factors. The focus of my research is not on the nature of each drug, but on the movement of usage and the means of its spread. Thus, the overview of each individual drug is brief, but my broad understanding of drug culture has made visible the "big picture" of American drugs. Social conflict, politics, socioeconomic status, health, and drug culture are all truly intertwined in a geographic sense, and each of these sectors of human life can provide insight into the others if explored. Drug use, however, is an especially unique lens through which to view society, due to its physically, mentally, and spiritually altering effects on the individual and on the community.

Jason Knight, SUNY Buffalo State, and **Russell Weaver**, Texas State University. *Measuring and Mapping Urban Shrinkage in the United States*. This paper aims to describe patterns and trends in urban shrinkage in the United States, with a particular emphasis on changes that occurred at the census tract level over the past four decades. The paper has two overarching objectives. First, it proposes analytical tools and empirical approaches for studying urban shrinkage in the United States. In particular, it combines a threshold method of identifying shrinking areas with time-varying population shrinkage centroids and location quotients to explore current and projected patterns of tract-level urban population shrinkage in the United States. In that respect, the paper contributes to the suite of tools currently available for analyzing shrinkage with quantitative data. Second, the paper poses and attempts to answer several inter-related research questions that probe the multiple dimensions in which—or stock variables on which—shrinkage operates. Among other things, we find that while the distribution of U.S. shrinking places is highly concentrated in the Rust Belt, the geographies of population shrinkage at the census tract level are dispersed across the nation. Further, we find that population shrinkage and economic contraction are statistically dependent phenomena, and that population shrinkage occurs disproportionately faster than shrinkage in the scale of the residential built environment. Key words: urban shrinkage, shrinking cities, urban decline.

Heidi Lannon, Santa Fe College. *Geoscience Engagement and Outreach - Recruitment and Retention Challenges*. In recognition of Geography as a found major Santa Fe College, the University of Florida and the Orlando Science Center partnered to create the Geoscience Engagement and Outreach (GEO) Program. The objective is to recruit, retain and mentor students from underrepresented groups, who are non-science oriented, from diverse socioeconomic backgrounds and age groups, and are first generation college attendees. The Geoscience Engagement and Outreach program, funded by the National Science Foundation, supports annual cohorts of two-year college students. Santa Fe College is an open-access academic environment, accepting students with a high school diploma or equivalent. While diverse in

ability and backgrounds, students in 2-year environments may lack organized affiliations, have challenging family or employment situations and be unable to participate in structured programs. Recruitment and retention of students is achieved through academic advising, faculty mentored research in meteorology, soil hydrology, and STEM education, and skill-building for careers to produce graduates prepared for future employers. The research experience with University of Florida faculty is integrated with classroom work and a paid summer internship at the Orlando Science Center. The goal is to ensure transfer to a 4-year University in Geosciences or a related field. The second cohort of GEO Fellows is completing their experience and the successes and failures of the GEO program recruitment and retention will be reported.

Qiuxi Li and Yilan Xu, University of Delaware. *Economic Livelihood and Socio-cultural Transformations: Insights from Disaster Migrants in China*. The magnitude 8.1 earthquake in 2008 that struck Sichuan, China left more than 87,000 deaths and millions of people homeless. Many of the victims are Qiang, an ethnic minority group in China. In the years since the catastrophe, the Chinese government has undertaken an enormous task of reconstruction. Within two years after the earthquake, thirty-eight cities and towns had been reconstructed through three types of methods: namely, in situ reconstruction, nearby reconstruction and relocation. The communities affected directly by the earthquake had varying levels of lifestyle change regardless of the reconstruction method chosen, especially relocation. In order to observe the contemporary status of these displaced communities, I conducted an ethnographic fieldwork in the quake zone, eight years after the quake. This paper focuses on a specific Qiang village which had been relocated 150 miles away. I address the issues of post-disaster migration, reconstruction and adaptation from everyday livelihoods and sociocultural dimensions.

Erik Lyttek and Garrett Nieddu, Montclair State University. *Modeling Emerald Ash Borer Spread and Timber Losses in New Jersey*. Invasive populations of the Asiatic pest Emerald Ash Borer (EAB) have eliminated 70 million North American ash trees from Michigan to Pennsylvania. Exotic pests and disease have become an increasingly common issue in forests as globalized trade brings exotic species into unfamiliar systems. Numerous tree species have collapsed, or are collapsing, due to the impact of foreign vectors. EAB spreads through forests in a wave and leaves upwards of 99% of affected trees dead within 5 years. The main body of the infestation spreads in a wave outward from affected trees, while satellite populations develop and accelerate the spread exponentially. Due to its rapid advance, it is difficult to quantify losses and spread. Whereas many other modeling methods fall short of being accurate representations either by being too small in scope, or too general, we have constructed a model based upon Fisher's equation for diffusion and used parameters derived from empirical data. Using this model we are planning to project losses of ash timber over time, as well as extrapolate the population of EAB. The effect of various regulatory actions can be simulated as well by varying the related parameters similar to results in other regions.

Jennifer Mapes, Kent State University. *Small Towns in the News: An Analysis of U.S. Media Coverage 2006-2016*. National news media coverage of small towns is an essential component of understanding both actual trends and cultural perceptions of small towns. Despite the relatively small percentage of Americans who live there, this settlement type remains ideologically central to U.S. identity and narratives. Nostalgia and a sense that the small towns were/are somehow "better" than big-city or suburban America dovetails into ideas about sustainable urbanism, urban design, and city planning. Cultural representations of small towns influence the everyday lived experience of real-life cities and suburbs. With such a small percentage of U.S. residents living in small towns, how do ideas about these places enter our imagination? While film, television, and fiction are clearly part of this, non-fiction plays a role as well; and what we read about small towns in the newspaper, that we can believe, right? Well,

sometimes. This is not a story of alternative facts; instead, it's a complicated intersection between cultural expectations and the lived experiences and events in these places. To explore the intersection of small town trends and how these trends are narrated for a national audience, I looked at ten years of national media coverage, from 2006 to 2016. Results support previous research suggesting that small towns are frequently lumped together with rural areas (e.g. 2016 presidential election coverage), leaving little room for the nuance of a true urban-rural continuum. Articles also referenced (and reinforced) existing stereotypes of small towns, looking at events that were "surprising" given that they occurred there, or focusing on presumed isolation and homogeneity. Together these articles both shape, and are shaped by, cultural understandings of small towns.

Paul Marr and Claire Jantz, Shippensburg University. *What Surface Artifacts Can Tell Us About Abandoned Chilean Nitrate Plants*. The highly variable nature of the Chilean nitrate industry (c.1890-1930) led mine owners to adopt various tactics—such as wage cuts or investment in additional machinery and/or workers—to increase profitability. We hypothesize that differences in the profit making ability of these mining facilities (oficinas) would be detectable in the surface artifacts found in on-site trash pits. We recorded and categorized over 4000 surface artifacts from eleven Chilean nitrate oficinas during field visits in 2014 and 2017. Specifically, we expected that the ratio of 'personal' items (items purchased with disposable income) and food remains (items of necessity) would differ based on the differing local conditions of the oficinas. Those oficinas situated on lower grade nitrate ore (caliche) tended to have higher percentages of necessities relative to non-necessities. These oficinas also invested heavily in production equipment and/or additional manpower, driving down wages. Our results suggest that the profit making ability of an oficina can be detected, at least in part, in the artifacts left behind by the nitrate workers.

Sean McLaughlin, West Chester University of Pennsylvania. *Examining Multi-faceted Vulnerability to Natural Disasters in the Commonwealth of Pennsylvania*. When examining vulnerability to natural disasters, social vulnerability including demographics, and risk of hazard exposure (physical vulnerability), specifically environmental phenomenon, can be used to determine vulnerability. When one examines only one facet of vulnerability as opposed to multiple, different results can be found. For example, when only considering social vulnerability in Pennsylvania, Philadelphia County is the most vulnerable to natural disasters, and when only taking hazard exposure into account, Berks County is the most vulnerable to natural disasters. This research attempts to examine both social vulnerability and hazard exposure simultaneously to in turn find a more in depth and all-encompassing understanding of vulnerability to natural disasters in the commonwealth of Pennsylvania.

Jessica Miller, Montclair State University. *Inclusion and Exclusion in Environmental Decision Making*. This presentation will discuss a case study in Gowanus, Brooklyn to explore inclusion and exclusion in urban environmental decision-making processes. This work gains support from theoretical considerations in urban political ecology and interdisciplinary research on green gentrification and how power differences and inequity impact civic involvement. The Gowanus Canal in Brooklyn, New York became a Superfund site in 2010, after much debate between local, state, and federal government offices over how to pursue clean up. Private development, local and state initiatives are addressing the sewage and other contamination along the banks of the canal while the Superfund clean up in the waterway takes place. The area has become a site for enacting waterfront planning and economic development, green infrastructure creation, brown-field redevelopment, and other local and state green planning initiatives. Public forums on cleaning and greening Gowanus have engaged the community, and allowed space for discussing the possibilities for the future of the area. This paper will focus on interview responses in relation to the federal Environmental Protection Agency decision-making process. Why do some

residents support or oppose the clean up processes in Gowanus, and what influences their ability or desire to take part in the decision-making processes? Further, for whom is this space being redeveloped, and how do inclusion and exclusion operate to create divisions in decision-making processes surrounding the clean up?

Carlos Alberto Morales-Ramirez, National University of Singapore. *Cartographic Vexillology of North America: Exploring Maps in Subnational Flags as a Tool to Teach the Theme of Location*. Maps are instructional images incorporated in pedagogy, especially in geography. Maps are everywhere, even in flags. At the national level, only one country has a map on its flag, Cyprus, while subnational flags use maps more often. This study analyzed 4,804 subnational flags in North America to identify if maps are incorporated as well as the presence of the theme of location. The theme of location is one of the five themes in geography established in 1984, created to aid geography education. Location, provides a conceptual base to teach geography and geographic elements. It is a main theme in geography and a starting point in geography research. Of the total number of subnational flags studied, 92% (429) have a map on them and 31% (105) incorporate the theme of location. The United States is the country with the most subnational flags, the most flags with maps and the most flags with the theme of location. Keywords: cartographic vexillology; subnational flags; North America; location; maps.

Thomas Narin, University at Albany. *The Appeal of Chinese State Capitalism in Latin America*. This paper examines the attractiveness of contemporary Chinese State Capitalism (China's state directed economic system) beyond China's borders. By analyzing five broad governance factors on the ground in twenty-five Latin American and Caribbean countries, this project develops an empirically-grounded tool, the Neoliberal-Dirigiste Continuum, to estimate the likelihood of Chinese State Capitalism being more or less attractive to different national government actors within the region. Drawing primarily on data from the Varieties of Democracy (V-Dem) database and from the Inter-American Development Bank's 2015 Database of Political Institutions (DPI 2015), this article examines the relationship between Latin American countries political organization and resultant (the issuance of) Chinese Policy Bank-issued loans. While the allure of Chinese State Capitalism and its spread across the Global South over the last two decades is not specific to any one world region, examining the China-Latin America political economic relationship is useful because it represents a blending of the global and the contextual.

Gia Nguyen, Montclair State University. *Item and Discriminant Analysis of Coastal Resilience Study*. Synthesized from previous experiences, the best practices against coastal floods aim to reduce their direct, indirect and long-term socio-ecological impacts. These practices provide a framework for conceptualizing the resilience challenge and recommendations to build it. The importance of including local factors in the decision-making process, for instance, is recognized to engender ownership, facilitate the flow of risk information, and in managing and maintaining the defensive measures adopted. Neither do we know where gaps exist in the papers' application of the best practices nor where the resulting resilience deficits may lie. Given their importance in informing the relevant environmental policies, public opinion, and investment in resilience, this knowledge gap needs to be addressed. Doing so also gives one opportunities to learn how future research could be improved in ways that fit the desired practices and reduce the chances of maladaptation, especially critical for areas with high projected coastal flooding related fatality. The paper presents results of a heuristic meta-evaluation of the coastal flooding resilience literature using item response and discriminant analyses. Despite our expectation, the results do not show that studies focusing on areas with the higher projected fatality, needing to take advantage of the best practices more urgently than others, do not necessarily do better in featuring the best practices as measured by the composite ability index. Other than highlighting this and other areas of future research

needs, this paper contributes to the literature by showing the application of novel tools in the quantitative review of the literature.

Darrell A. Norris, SUNY Geneseo. *Trump and Circumstance: Electoral Reflections in Rural Nebraska*. The inquest after the November 2016 presidential election embraced several factors germane to Trump's victory, including xenophobia, misogyny, white supremacy, anti-Federalism, income and educational inequity, evangelism, lost manufacturing and mining jobs, and – yes – the pent-up sense of neglect among rural Americans in Flyover settings. Northern tier counties in Nebraska certainly exemplify the latter factor, and all delivered Trump landslides by as much as 90 percent or as little as 70 percent of the popular vote, generally exceeding victories typically achieved by previous Republican presidential candidates. Counties in rural Nebraska seem very similar to the untrained eye, but are in fact diverse in relative isolation, provision of services, population trends, and economic vitality. The presentation suggests the relationship between the scale of Trump's victory and the dimensions of distress among rural Nebraskans hoping to make the Plains Great again.

Sydney Oluoch, Montclair State University. *Quantitative Review of Renewable Energy in sub-Saharan Africa Using Bibliometric Mapping Techniques*. This study provided an insight to the scope, trends and focus of renewable energy in (Sub-Saharan Africa) SSA by quantitatively reviewing a total of 373 scientific publications in Sci-direct database from 1990 to 2016. The quantitative review was based on geographical scope, different types of renewable energy, methods used, distribution of articles in journals, year of publication and bibliometric mapping using the VOSviewer software. The percentage distribution by energy type indicated that biomass (47%) was the most dominant renewable energy type studied. This was also reflected in VOSviewer bibliometric mapping as biomass related terms dominated the corpus. Although, the bulk of scientific literature seems to lean towards biomass energy such as woodfuel and charcoal, the focus of renewable energy studies in SSA should be widely distributed among other emerging renewable energy options in attempt to unearth the potential of these sources of energy in SSA. **KEYWORDS:** Quantitative review, Bibliometric mapping, renewable energy, Sub-Saharan Africa, Sci-direct.

Mark Rhodes, Kent State University. *The Peekskill Riots: Landscapes of Performance and Performances of Landscape*. In 1949, Paul Robeson, the internationally recognized actor, athlete, activist, singer, and scholar, held civil and labor rights concerts in Peekskill, NY. Due to animosity towards socialism and civil rights, these performances were marred by protests that turned progressively violent. These events are now known as the Peekskill Riots, and serve as a major milestone in the United States' history surrounding protest, music, politics, and Paul Robeson. In 2015, the British-Nigerian actor Tayo Aluko brought his musical "Call Mr. Robeson," to Peekskill. This study of Aluko's "Call Mr. Robeson" draws upon methods and theory in ethnomusicology to investigation of the memorial landscapes of Peekskill and the performance. Combining a focus on the performance and Aluko himself with recognized methods of landscape analysis, I demonstrate how he performs and shapes ideas of place and space surrounding the Peekskill Riots, as well as how the landscape, in turn, affects Aluko and "Call Mr. Robeson."

David Robertson, SUNY Geneseo, **Chris Larsen**, University at Buffalo, and **Steve Tulowiecki**, SUNY Geneseo. *Cultural and Ecological Histories of the Big Tree to 1857*. This paper interprets the entwined cultural and ecological histories of the Big Tree, an oak of extraordinary size that stood on the banks of the Genesee River near Geneseo, New York. The tree died in 1857. This historically important and physically notable tree served as a Seneca landmark, treaty tree, and subject matter for noted American artists and writers. With a preserved section of the tree's trunk made available for tree ring analysis in 2017, a unique range of data sources exists for exploring possible Native American and pioneer influences affecting the

Big Tree's growth rate and form. More broadly, the Big Tree may present evidence for human influences on pre-settlement oak forests in Western New York. Archival data sources documenting the tree's appearance, as well as physical measurements and tree ring data are discussed.

Jennifer Rogalsky, SUNY Geneseo. *Using Photographic Inquiry and Story Maps to Understand Community Assets in the Face of Gentrification in Red Hook, Brooklyn*. Brooklyn is rapidly gentrifying; however, Red Hook was cut off by Robert Moses' Gowanus Expressway, and stark socioeconomic contrasts exist between residents in public housing and the rest of the neighborhood. Life magazine labeled Red Hook one of the ten worst neighborhoods in the United States, and the crack capital of America (Colt 1988). However, Red Hook offers unobstructed views of the Statue of Liberty and Manhattan, and it is one of the last pieces of waterfront to be redeveloped in New York City. This research explores whether Red Hook's redevelopment can be directed carefully, so that it does not suffer many of the negative effects of gentrification. Good local leadership, participatory planning, and "community developers" are crucial for the future of the neighborhood, as residents are beginning to suffer from what they call "research fatigue" or "planning fatigue". They are tired of outsiders telling them what should happen to their neighborhood. Thus, this research allows residents to have a say in the future development plans for their community. By listening to the community as resident-experts through the method of photographic inquiry (participant photography), residents can identify what they view as the community's most important assets, and communicate what should be done regarding planning and urban design for Red Hook. Local land owner and developer, Greg O'Connell, stated: "you have to listen to the community – no one knows it better than the community members. It's easy to be a developer, but if you want to be a good developer, you have to be a community developer" (O'Connell 2017). The residents' photographs of what they identify as the neighborhood's most important assets, maps of these locations, and information from lengthy one-on-one interviews with residents will all be combined in an ESRI Story Map to better tell the residents' stories.

Richard Shaker, Ryerson University. *Investigating Urban Heat Island through Spatial Analysis of New York City Streetscapes*. Cities experience urban heat islands (UHIs), which continue to pose challenges for humanity's increasingly urban population. Past studies have revealed that urban morphology, along with other geographical phenomena (i.e., distance to water, albedo), can account for much of the spatial variability of UHIs. Although progress has been made for reducing their impacts, improvements remain to further understanding how streetscapes influences UHIs. In response, this study was created to: (i) examine the spatial distribution of mean ambient night temperature across 34 streetscapes in New York City; (ii) develop and compare global and local models between- natural and built landscape characteristics- and mean ambient night temperature; and (iii) use geographically weighted regression (GWR) to evaluate and map local patterns of correlated relationships. In 2012, urban boundary layer air temperatures were recorded from September 24th to October 25th across 34 publically accessible rooftop weather stations. Besides assessing common landscape predictors of UHIs from the literature, this study uniquely added high-resolution (1 m pixel) land cover class configuration metrics for tree canopy, grass/shrub, buildings, and roads. Local Moran's I statistic displayed significant spatial hot and cold spots of UHI across New York City. Pearson's correlation coefficient (r) test revealed that photosynthesis activity, elevation, sky-view, and road arrangement were the strongest predictors of mean ambient night temperature. Six multiple regression models were made, with GWR fitting the UHI very well (R-Square = 65-74%). Local pseudo-t statistics of key explanatory variables were mapped and related to mean ambient night temperature, confirming the importance of GWR for understanding spatial relationships of UHIs. The results inform that freely available geospatial data from digital repositories within governmental agencies, paired with spatial analysis freeware, can be used to predict UHIs with noteworthy agreement.

Lastly, the streetscape design findings should be considered during urban sustainable development planning and future city redevelopment.

Julia Sickler, Montclair State University. *Sustainability within the Entertainment Infrastructure in America*. The current global trend in urbanization has seen initiatives for enhanced sustainability around the world. One often overlooked aspect of this urban “greening” is the role of performing arts and entertainment complexes, as they are major contributors to climate change due to energy usage, land degradation, transportation footprint from attendees, and waste produced at these sites. This paper presents a history of the cultural importance of entertainment centers and a methodology for sustainable evolution, including building modern facilities and retrofitting old arenas to be more in line with sustainable development. Case studies from casinos, sports arenas, and entertainment venues that have undergone major sustainability overhauls while quantifying and tracking their results are reviewed in this paper. A pilot project is presented that will bring energy efficiency improvements to a large amphitheater, BB&T Pavilion in Camden, New Jersey, and forms a procedure to reduce pollution and also increase the livability factor and economy of the town itself. Since entertainment can be influential, the viability of these venues can act as an example and education tool through promoting fixtures such as zero waste stations, compostable utensils and materials, and volunteer programs to its visitors. The economic, social, and environmental benefits of these large centers adapting energy efficiency improvements and waste diversion policies can be considerable, and can be used as an incentive for new and existing venues to make important changes to reduce costs and stay relevant in the growing entertainment sector of urban development.

Meghann Smith, Montclair State University. *Assessment of Hard Apple Cider Tourism Potential in the Hudson Valley Region*. Hard apple cider is an emerging industry in apple-growing regions of the United States due to the growing popularity of local craft products in the alcoholic beverage and tourism industries. This study strives to understand how hard cider may affect local product promotion, rural tourism, and agriculture’s economic viability in the Hudson Valley region, and other rural areas of its kind. Tourism is evolving towards travelling for experiential value; the hard cider industry offers a package that encapsulates an environmentally and historically significant experience that can fulfill this desire for authenticity. By identifying the consumers and their expectations, the possibilities for building tourism specifically surrounding products with regional significance expand significantly. In this study, we visited seven hard cider producers in the Hudson Valley region, and administered 305 customer surveys. Results suggest the most important factors influencing hard cider tourism was to experience something new, to learn about local products, and to support small/local/artisan businesses. Customers also showed a high willingness to travel for the product, and put great value into the experience of visiting a cidery. As shown by the inherent belief that locally produced products are of higher quality, consumers are willing to pay premium costs for local goods. This research demonstrates that agricultural and regional development industries should put forth effort in reaching out to this incoming demographic through encouraging the creation of destinations and products with experiential value.

Todd Sundberg, University of Delaware. *At the Intersection of Urban Agriculture and Social Justice Activism in Wilmington, Delaware: Practices and Perceptions*. Academic literature on US urban agriculture’s (UA) potential for social justice primarily centers on larger cities, such as Detroit or NYC. This focus obscures lessons from smaller cities such as Wilmington, Delaware; known both as “Murdertown USA” and “America’s Corporate Capital”. A diverse array of participants and organizations engage in UA in Wilmington with varying social goals and everyday practices within their sites. These goals and practices range from community change, education for underprivileged youth and marginalized communities, and providing economic opportunities. Participants’ perceptions of the impact of their social work also vary.

Preliminary data from fieldwork conducted in 2017 suggests that considerations of the affective practice of UA in Wilmington, Delaware offers an alternative trajectory for evaluating its transformative potential. While possibilities for subversion of structural oppressions are observable in Wilmington's UA, there are also possibilities for UA to augment existing inequalities. These issues include neoliberal realities, (in)visibility, and inter-and-intra group tensions. I argue that Wilmington, Delaware helps illuminate the intersection of UA and social justice activism in smaller US cities, while mirroring trends in larger US cities. Additionally, considerations of participants' own affective assemblages allows for an intersectional viewpoint which broadens our understanding of UA and social justice.

Li Tong, SUNY Buffalo. *Mapping Large Event Sentiment Clusters by Integrating Twitter with a Remote Sensing Approach*. Since Twitter emerged in the social media world has become a centralized global platform on which hundreds of millions of people share knowledge, information, and personal opinions (Mark Graham, et al., 2013). Recently, the United States' newly inaugurated President, Donald Trump, has become quite a hot topic on Twitter. It is widely known that there is a large disparity between those who support him and those that do not. My research asks the question how can we determine cluster of opinions in Washington, D.C. during a large polarized event. Twitter data contains the narrative text used to convey a person's attitude towards a particular topic. However, one of the disadvantages of twitter is the limited provision of geographic context. Tons of tweets are published on the internet but less than half of them are attached to geocoded locational information. In combination with remote sensing, this Twitter data can be more accurately clustered to determine hot spots of the public's Trump opinions. An advantage of the remote sensing data is that it contains complete spatial information for a single moment. Inversely of Twitter, the remote sensing image cannot provide sentimental detail. As a result, the combination of the social media data and the remote sensing is necessary for both twitter researchers and remote sensors. This sentimental analysis will reveal people's attitude towards Trump in the study area of Washington DC. Combining these two parts of data, this project tends to reveal how the sentiment distributes among the area where people are.

Stephen Tulowiecki, SUNY Geneseo. *Can Information Retrieval Approaches Be Applied to Extract Historical Landscape Descriptions from Unstructured Text in Eastern North America?* This study tests whether an information retrieval (IR) method can be applied to effectively rank paragraphs from historical texts (ca. 19th century) by their probability of containing meaningful and geographically-resolved historical landscape descriptions. IR methods have been widely applied to rank text according to how well they match search terms. This study specifically applies a machine-learning technique used previously in IR applications to discover forest compositional descriptions (FCDs) of the 18th and 19th centuries within a collection of digitized county histories, based upon the frequency of key terms. Evaluating the model's performance upon a test dataset of county histories from the State of Ohio, the technique classified paragraphs with an accuracy of 94%. The study's collection of Ohio county histories produced more than 400 unique descriptions of historical forest composition at the town scale. This study manifests how IR approaches can be used to speed up the search for historical accounts from digitized texts across biogeographical applications.

Taylor Wiczerak, Montclair State University. *Willingness to Pay for Green Infrastructure in Response to CSO Activity in Elizabeth, NJ*. Significant water pollution caused by flooding due to heavy precipitation and extreme weather events such as Hurricane Sandy and similar storms of the past have become a considerable problem. The combined stormwater and untreated sewage is diverted to adjacent water bodies during heavy downpour resulting in contamination and water pollution. This contamination, especially in urbanized areas of northern New Jersey, is largely a product of discharge events from combined sewer overflows (CSOs). Though the effects of the contamination caused by polluted water

discharge through CSO has been studied by some researchers, the socio-economic aspect of these issues has not received much scientific attention. This study seeks to understand the socio-economic facets arising due to of the continued use of CSOs in Elizabeth, New Jersey. A willingness to pay study is carried out in order to analyze the willingness of residents to pay for improvements to CSO infrastructure through the assimilation of green infrastructure such as bioretention gardens, rain barrels, and green roofs. In addition to delineating the economic choices of residents, an analysis is carried out to understand how different factors such as age, economic status, and ethnicity, in addition to perceptions of environmental problems and governmental action affect their willingness to pay for green infrastructure improvements.

Christopher Willer and Jennifer Mapes, Kent State University. *Using Urban Clusters to Identify and Track Change in Small Towns*. Small towns permeate American culture in media and literature. The 2016 election highlighted our collective belief that cities and small towns are politically polarized. But what differentiates between a city and a small town? How can we compare these two places and study the demographic “truths” of our cultural stereotypes? Despite the frequent appearance of small towns in popular discourse, they are far less often the focus of academic research. When they do make an appearance, definitions of what “counts” as a small town varies broadly. Oftentimes, researchers conflate small towns and rural into one. Here, we consider small towns as urban. The “urban cluster” definition used by the U.S. Census offers a possible method of identifying and quantifying change in U.S. small towns. The urban cluster uses population density to identify small cities between 2,500 and 50,000 in population and to distinguish between small towns and suburbs of larger cities. This paper illustrates the opportunity provided by Census identification and tracking of these clusters, but also highlights the challenges of using this method to measure longitudinal change. Our focus here is on what can and cannot be determined about U.S. small towns using urban cluster data from the 2000 and 2010 Census. We find that a more comprehensive, multidimensional measure of small towns is needed and recommended some possible paths forward. Keywords: small towns, urban cluster, urban change.

Maxine Williams, Syracuse University. *The American Television Landscape and the Representation of the Black Family*. In this paper I analyze race, history, the television industry, and the importance of representation by providing a brief history on the television industry and its evolution of the portrayal of the African American family, through a comparison of *The Cosby Show* and *Black-ish*, two similar American sitcoms that were created in two very different time periods.

Chuck Yeager, SUNY Suffolk, **Jonathan Marks**, Bellarmine University, **Jay D. Gatrell**, Eastern Illinois University, and **Jeremy Bennett**, Indiana State University & Evansville Day School. *The Institutional Determinants of Internationalization: The Cases of Study Abroad Participation and International Student Enrollment*. Globalization, global citizenship, and cross-cultural competence are central to the mission of post-secondary institutions, and internationalization has become a pillar of the modern university. Indeed, internationalization is often linked to the competitiveness of institutions, but the process can be accomplished in a variety of ways. In this research, we examined study abroad participation rates and observed international student enrollments to understand the institutional determinants that drive critical components of campus internationalization. Using data from the National Center for Education Statistics, we identified potential explanatory variables for study abroad participation and international student enrollment and conducted several regression analyses to assess the relationships between variables. We found that several explanatory variables were significantly related to study abroad participation and international student enrollment, including availability of Pell Grants, size of institution, student gender, and faculty salary. Models also showed that there were differences in how

variables could be used to predict study abroad participation and international student enrollment at schools based on school size and program array.

Qiuyi Zhang, Mary Northridge, Stella Yi, and Sara Metcalf, SUNY Buffalo *Modeling Social Factors to Promote Oral Health Equity*. Many U.S. racial and ethnic minorities suffer from poor health status and face substantial cultural, social, and economic barriers to obtaining quality health care. The health disparities experienced by racial and ethnic minorities relative to the white majority population are due to many factors, including low socioeconomic status, inadequate access to health care, inferior quality of health care received, forms of discrimination, and language barriers. The pathways through which minority status influences health status are composed of complex interactions among these factors. Nonetheless, the methods for measuring health disparities and pursuing health equity have heretofore compared diverse social groups employing the disparity index, which ignores complex interactions. This study examines whether social factors contribute to or ameliorate the unequal access to health care and poor health outcomes experienced by people who identify as Chinese American. A dynamic agent-based model is developed to simulate how social relations and socioeconomic factors shape oral health care access and care-seeking behaviors for Chinese Americans in New York City. Agent-based models facilitate representation of diverse individuals, human behaviors, and social networks that mediate patterns of communication and disease transmission at multiple scales in spatially-explicit GIS environments. This simulation model includes two types of mobile agents. Patients are simulated as agents who have opportunities to meet each other at outreach centers and interact with neighborhood resources. Health care providers are simulated as agents who may or may not deliver culturally appropriate care. The model provides a framework to test the potential impacts of policies and programs (training community health workers) by determining which ones are likely to promote oral health equity. Findings from the agent-based model will aid in priority setting and resource allocation by public health practitioners and policymakers.

Poster Abstracts

Alexander Balili, Frank Tolbert, and Joshua Gonzalez, Binghamton University. *Gentrification and displacement in the Johnson City*. Binghamton University will accept 300 individuals into its new School of Pharmacy. Construction of this new school will continue through 2017, along with the newly built Decker School of nursing, which will be moving directly next door to the School of Pharmacy. Millions of dollars are being invested into these areas, in turn, the neighboring real estate will be influenced tremendously. The changes that will occur in the Johnson city area include, demographic, economic, commodity, and more. This new study will highlight Gentrification and Displacement, two phenomena that fall in conjunction with one another.

Abigail Bobbette and Jennifer Rowan, SUNY Geneseo, *Associations between Forest Type, Diversity and Soundscape Parameters in Letchworth State Park*. The purpose of this study is to investigate variation in soundscape in three different habitat locations in Letchworth State Park, each with distinct vegetation. Within each site, transects were taken to determine species diversity and composition, canopy cover, and ground cover. Site 3 was the most diverse according to a rank abundance curve, it also had lower diameter at breast height, and point to plant measurements than the other 2 sites. Forty-eight hour recordings were done in each habitat in summer 2017 to assess biodiversity of vocalizing organisms and the impact of anthropogenic noise. We hypothesize that the most vegetatively diverse stand will have the most biophony.

John E. Bodenmann and Jennifer Haney, Bloomsburg University. *Piece by Piece: Helping Haitians Reduce Waste and Create Opportunities*. ABSTRACT Municipal solid waste (MSW) generation and disposal has become a significant and growing global problem. Population growth, growing consumerism, lack of publically available disposal services, as well as the general lack of large and steady markets for recyclable materials, particularly for plastics, has exacerbated the waste generation and disposal problem, particularly in poor developing countries like Haiti where plastics have become an exponentially growing component of the waste stream. Generally, waste disposal options exist on a spectrum ranging from open-air dumps to sanitary landfills. In Haiti, the primary disposal site for Port-au-Prince, the country's largest urban area, is the 160-hectare Truitier open-air dump, located ten kilometers from downtown, and estimated to receive 1,000 tons of waste per day, much of the waste increasingly some form of plastic, putting the environment and health of the population at all ready serious and increasing risk. Numerous challenges exist for effectively addressing the MSW generation and disposal problems in Haiti. This paper outlines a number of these challenges, with a particular interest and focus on the sources, creation, and disposal of plastic waste. The analysis highlights several encouraging recent small business developments that can serve as a model for creating both employment opportunities, as well as markets for recyclable plastic materials—an important step toward helping to address the growing waste generation and disposal problems in Haiti. Keywords: municipal solid waste, Haiti, recycling

Warren Bristol and Pankaj Lal, Montclair University. *Wildlife Conservation Society- Rwanda Project Improved Biomass Cookstoves in Rwanda*. Rwanda has seen some of the most rapid economic development in all of Africa, but has also seen some of the most rapid declines in child mortality and life expectancy annually. Among the most pressing concerns for public health and conservation efforts are traditional Rwandan cookstoves, called amashyiga atatu. There is a casual link between the use of indoor wood-burning stoves and a number of dangerous conditions, including childhood pneumonia, lung cancer, and throat cancer, largely due to heightened levels of carbon dioxide and particulate matter produced. This method of cooking also raises environmental concerns due to the amount of firewood it burns, and because of the methods through which this wood is obtained. This presentation will discuss the initiatives to implement a new, more sustainable and health-friendly cookstove, the canarumwe, which produces less smoke and uses less firewood. Reducing the amount of smoke in a household has shown to drop infant pneumonia affliction rates by about 40% due to the improved air quality. Further, since this uses less firewood, surveys have indicated that illegal firewood harvesting has dropped in the areas where the canarumwe has been adopted. Adoption of the canarumwe is greatly inhibited by a lack of pottery cooperatives' ability to distribute the cookstoves to markets in rural areas. The Wild Life Conservation Society (WCS) is looking at multiple ways of improving the supply chain for the cookstove, including hosting sensitization events and using monthly order sheets and delivery services in rural Rwanda.

Leeann Bruetsch, SUNY Geneseo. *Assessing Winter Feeding Vocalizations of Black-capped Chickadees and American Goldfinches and their Response to Anthropogenic Noise*. Birds vocalize for many reasons, including communication of potential threats, behavioral cues, and alerting others to new food sources. Local species are found across a range of habitats from natural to those highly impacted by humans. One of the primary ways humans impact local environments and communicating birds is through anthropogenic noise. Effects of anthropogenic noise on winter behaviors and vocalizations have not been studied intensively, but we predict changes in song and call characteristics depending on exposure to anthropogenic noise. This investigation of winter vocalizations and behavior focused on Black-capped Chickadees and American Goldfinches. Five study sites were used, two at the Roemer Arboretum, one at the GVC Island Preserve, and two at different residential areas. Each research site was close to a road and had a bird feeder set up for a week before recordings were performed. Audio recordings of feeding site

vocalizations were done at hour-long intervals for each site, once during the morning (between 6 am - 10 am) and once during the afternoon (between 12 pm - 5 pm). Observers noted species identity and behavior during recordings. Each recording was analyzed using Raven Pro software to measure maximum frequency and minimum frequency of each vocalization. We will report on differences between species, between sites, and relationship of vocalization characteristics to anthropogenic noise.

David Connelly, Michael A. Davis, and Richard S. Courtney, Kutztown University of Pennsylvania. *Spatial and Temporal Trends in Lightning Flash Density in Florida, USA*. Lightning flash density in the USA are most common in the state of Florida. Florida is climatologically viewed as the “capital of lightning” and experiences a high frequency of thunderstorm activity. Strong updrafts counteract with opposing downdrafts to create a polarized atmosphere where electrical charge can be exchanged. The climatology of lightning is to be examined for trends in concentration and number of strikes. This paper aims to analyze patterns in lightning strikes across the 67 counties of Florida on a seasonal basis of spring (March – May), summer (June – August), and autumn (September – November). The data was used from 1988-2012 and partitioned into five-year intervals to better analyze the temporal properties of lightning. Spatial segregation indices will be used to assess the clustering of lightning strikes in counties and the total number of strikes will be considered with choropleth mapping. Correlations between lightning strikes and number of thunderstorm days may be considered to assess whether there is a direct relationship between thunderstorm frequency and the number of lightning strikes.

Brendan Cullen, SUNY Geneseo. *Modeling Potential Soil Loss in the Genesee River Basin using the Revised Universal Soil Loss Equation*. In regards to food security and sustainable agriculture, soil degradation is a serious environmental issue that the effects of can be seen throughout the world. An important aspect of soil degradation is soil loss due to erosion, both naturally and human-induced. Soil loss reduces soil organic matter content, which can deeply affect crop production and biodiversity. Research on soil erosion and its effect on agricultural productivity began in the 1930s, and many methods to estimate soil loss have since been developed. One of the most common methods is the Revised Universal Soil Loss Equation (RUSLE). This method was built upon the Universal Soil Loss Equation, which was originally published by a team of erosion specialists in 1965. The equation combines rainfall-runoff erosivity, soil erodibility, slope length, land-cover management, and conservation practice factors to calculate the average annual potential soil loss in tons per acre per year. The purpose of this analysis will be to model the potential level of soil loss in the Genesee River Basin, which spans from Rochester, New York, to the northern tip of Potter County, Pennsylvania. Understanding soil loss is essential to its prevention, and RUSLE is an important tool used by conservation, regional, and urban planners.

Jeff Doser, SUNY Geneseo. *Using Soundscape Maps to Assess a Local Soundscape*. Analysis of soundscapes allows for biodiversity assessments, measuring the anthropogenic impact on landscapes, and understanding the natural geographic entities in a given area. Understanding the interaction of natural biological sounds (biophony), sounds from naturally occurring aspects of the earth (geophony), and human-produced noise (anthropophony) is one method used to understand the soundscape of a given area. I obtained 15 recordings throughout the Roemer Arboretum at SUNY Geneseo using a Song Meter SM4 recorder from Wildlife Acoustics. From these recordings, I used a method devised by Chris Bobryk at the University of Missouri to approximate the percentage of biophony, geophony, and anthropophony in the soundscape recordings at each location. In ArcGIS software, I utilized the Kriging tool to interpolate the percentages of sound across the entire Roemer Arboretum. I then developed three different maps displaying the amounts of biophony, anthropophony, and geophony present over the entire forest plot. Biophony was most present in the north-western portion of the Arboretum, anthropophony was distributed evenly throughout the plot, and geophony was most prominent in the

southwestern portion of the Arboretum. Using the Highest Position Tool in ArcGIS, I found that anthropophony was the most prominent type of sound in each cell in the soundscape, suggesting that the Arboretum soundscape is dominated by anthropogenic noise. Researchers can use soundscape maps in this manner to help understand the anthropogenic impact of noise in natural areas where noise is not desired.

Vincent Fortino, Connie Driedger, Joy Fritschle, and Joan Welch, West Chester University. *Creating a Campus Tree Geodatabase for Online Public Use: Challenges*. Research has established the benefits offered by urban forests to environmental health and well-being in communities. Urban forests should be managed to provide a maximum level of environmental, ecological, social, and economic benefits over time. Allowing for public access and use of an urban forest database provides for education of local citizens about the resource and how it could be improved over time, however this is accompanied by many challenges. This research addresses the challenges that are encountered when developing an online geodatabase of the West Chester University campus trees, for public use. Since 2009, West Chester University students have been working in collaboration with faculty and staff to create such a database which now holds over 2000 trees. The data was collected using global positioning systems (GPS) for locations and specifics were taken from each tree input to an ESRI ArcGIS geodatabase. The many challenges encountered through this research resulted from the initial creation of the database. This research was conducted during a time when technology was rapidly changing and the data collection technology and software used for this research was quickly outdated or drastically changed. There were also numerous people involved in the data collection which resulted in inconsistencies in the use of codes and data input. Many of the points taken had missing data and a method to recover the missing data must be determined. The lesson to learn is that consistency is key when collecting and reporting data, especially in database management.

Michael Fowler, Montclair State University. *Life-Cycle Analysis of Switchgrass (*Panicum virgatum*) based Ethanol*. In the United States, the development of the ethanol industry has been dominated by corn-based ethanol. These feedstocks require extensive energy inputs, have adverse environmental consequences, and economic implications for international food markets. Switchgrass (*Panicum virgatum*), on the other hand, is a native, perennial, high-yield crop, which can be used to produce cellulosic ethanol. Cellulosic ethanol can potentially reduce environmental impacts compared to biofuels produced from first generation feedstocks while creating economic opportunities. Under provisions of the Energy Independence and Security Act and the Renewable Fuel Standard, production of cellulosic ethanol is mandated to increase. Life-cycle assessment of switchgrass derived ethanol will help us quantify the comparative environmental performance of ethanol from first generation feedstocks as well as traditional fossil fuels. Such information is useful in making informed policy decisions, identifying life-cycle emissions hotspots in order to to prioritize process improvement, and implementing best-management practices necessary for commercial cellulosic ethanol production. Life cycle assessment of second generation feedstocks has focused exhaustively on global warming potential with minimal consideration to regional implications. A representative life cycle assessment must include environmental implications beyond singularity when bioenergy practices are to be employed across the United States. In this paper, we address these gaps by using analytical tools, best management practices, and technological advances in ethanol production evaluated across a complete suite of impact areas.

A.J. Giaccio, SUNY Geneseo. *Addressing the Likelihood of Future Superfund Designation Sites in Central New York*. This research represents a site suitability analysis for potential future brownfield or superfund site designation in two counties for Central New York State. Environmental justice areas and the density of tax parcels were also included as factors. The specific counties, Onondaga and Oneida, were chosen for

their importance to the region. Onondaga includes Syracuse while Oneida has Rome and Utica. Data consisted of a Toxic Release Inventory of harmful waste sites in New York state. Census data was provided by as TIGER and formatted in Excel for use in ESRI ArcMap. Census block centroids are available through Clearinghouse, containing information on property class for individual census blocks based on three-digit codes. City and township feature classes in addition to information provided by TIGER allowed for new data to be derived, resulting in a comprehensive database including criteria by which to determine potential locations for new remediation sites. The five criteria used in the site suitability analysis are diversity, proximity to existing brownfields, proximity to locations included in the EPA's T.R.I. per capita, proximity to K-12 public schools, tax parcels in an industrial property class.

Hamish Gibbs, Syracuse University, **Sean McCanty**, University of Massachusetts Boston, **Thomas Dimino**, University of Massachusetts Boston, and **Alan Christian**, University of Massachusetts Boston. *The Effects of Reach, Buffer, and Subwatershed Scale Habitat Heterogeneity on Macroinvertebrate Assemblages.* Habitat heterogeneity (HH) and land use variables at a variety of scales have been shown to be important to freshwater macroinvertebrates (FMI). The influence of HH is important in designing environmental restoration activities intended to improve FMI biodiversity in streams. To understand which factors have the most significant impact on FMI assemblages, this project investigated the relationship between environmental variables and FMI assemblages at three spatial scales: reach, buffer, and sub-watershed. FMI were sampled in the summer of 2016 at nine 100-m reaches in Eastern Massachusetts under three treatment conditions: active cranberry bog, restored cranberry bog, and least impacted reference. Sub-watershed and buffer (100 m) scale land use and land cover variables were collected using GIS and reach-scale habitat heterogeneity was calculated using a survey of local environmental variables. After analyzing the reach scale FMI assemblages using non-metric multidimensional scaling (NMDS) and correlating with environmental variable dissimilarity, sub-watershed HH in the form of basin elevation was found to have the strongest correlation with FMI assemblages over other reach, buffer, and sub-watershed scale variables. Further research into the relationship between HH and FMI assemblages will improve environmental restoration efforts by determining the spatial scale and set of factors influencing FMI assemblages.

Claire E. Havice, Jennifer J. Haney, Joseph A. Ciraolo, and Jerry T. Mitchell, Bloomsburg University. *Previews, Popcorn, and Perils: Popular Culture and Influences on Disaster Behavior.* The disaster film genre plays a starring role in disaster behavior by perpetuating myths alongside fast-paced action scenes. While few people can say they have direct experience with a disaster, many come to form their own opinions based on what they see on the silver screen. Five myths (Jones, 1993) pertaining to the physical and social aspects of disaster were analyzed in twelve films released between 2000 and 2016. The methodology is based on earlier research (Mitchell et al., 2000; Quarantelli, 1985), which includes both film selection and evaluation criteria. Findings indicate a shift away from story development, forewarning cues, and preparedness measures to the majority of a film's running time dedicated to the disaster. An emphasis on large-scale and global events with dependence on technology to solve the problem have become more popular themes in recent films. Physical metrics, such as magnitude, wind speed, and water height, have replaced death tolls as the most reliable statistic to assess a disaster's damage or severity. From the social perspective, there is greater emphasis on the powerlessness of humans in the face of unpredictable natural events. As myths continue to be conveyed in the disaster film genre, perceived risk could serve to hinder mitigation and preparedness initiatives, in addition to complicating response efforts. The challenge lies in the misinformation and dramatization of disasters in film, as some theater patrons fail to distinguish between Hollywood's creative liberties and reality.

Matthew Heaton, SUNY Geneseo. *The Geography of Vulgarity: Scraping Twitter for Evidence of Social Influence in the United States*. A vast repository of personal insights and dialogues exist in cyberspace, providing an invaluable glimpse into human social behavior outside of a lab space. The second-most popular online forum in the United States is Twitter, a platform in which users regularly interact with members of their immediate social circle and, at times, an extended public audience (Pew, 2016). This study involved “scraping” content as it was posted on Twitter using a Python script. Over the course of eight days, tweets were filtered in real time according to a list of 24 curse words. Of the filtered tweets (n=1,474,902), 2.9% contained identifying geographic data (n=42,724), effectively binding cyberspace to physical space. An individual’s use of taboo curse words online served as a proxy for risk-taking, attention-seeking, and otherwise socially-motivated behavior, which may initiate like behavior within a social network (Bond et al., 2012). Each tweet’s potential impact across space was illustrated using a simplified version of Lengyel et al’s (2015) method for physically estimating influence across a social network. The distribution of vulgar tweets provided some insight into the organization of social influencers across physical space. Hotspot analysis of Twitter keywords showed the clustering of above-average use of vulgar language in three US regions: The San Francisco Bay Area, the Gulf Coast region, and the northern Atlantic Seaboard. Normalized by county population, these hotspots indicate regions where the generation of social media content is especially high, and where, consequently, Twitter users may have a greater effect on one another’s social attitudes and behaviors.

Sam Heraghty, SUNY Geneseo. *Association of Floral Resources with Spatial Variation in Native Bee Abundance and Diversity*. In recent years there has been a marked decrease in the abundance of native bees due to a variety of factors including pesticide use and loss of habitat. This is especially problematic considering that bees provide important pollination services and almost 90% of plants require insects for pollination. Therefore, it is of great importance to take action to preserve these ecologically important pollinators. This study examines variation in native bee diversity and abundance across different sites within the Arboretum on the SUNY Geneseo Campus. Additionally, several methods were employed to gain a further understanding of floral resource use of native bees. A particular emphasis was placed on comparing use of native and non-native plants by bees in the Arboretum. The greatest diversity and abundance of bees was found in the site with the greatest floral diversity. The invasive species black knapweed (*Centaurea nigra*) was found to be primarily visited by the European honey bee (*Apis mellifera*). However, native bees seemed to have a preference for native plants such as boneset (*Eupatorium perfoliatum*) and goldenrod (*Solidago*). These results suggest that variation in native bee abundance and diversity within a landscape is related to floral resource availability, and managing the availability of these resources could be an effective conservation strategy. For instance, planting native species that flower during times when there is relatively low floral availability.

Elizabeth Holland, SUNY Geneseo. *Indian Fort Nature Preserve Palisade Project*. This project inventories tree growth and human disturbances on two palisade mounds, erected circa 1400-1500 AD, at the Indian Fort Nature Preserve in Geneseo, New York. Also explored are tree removal, revegetation, and other strategies for protecting this archeological site. This work was conducted through internship with the Genesee Valley Conservancy (GVC), owner of the Indian Fort property. The mounds are the remains palisades enclosing a Seneca meeting place. An important Seneca archeological site, the palisade mounds are threatened by tree growth and human activity, including excavation and trail use. Data was collected from extensive fieldwork to map the present condition of the mounds and options were presented for clearing, restoring and preserving the palisade mounds. The GVC is presently considering these options.

Eleanor Kelly, Renata Blumberg, Emily Fowler, and Pankaj Lal, Montclair State University. *Farmer Decision-Making in Local Food Systems: Preliminary Findings*. In recent years, local food systems in NJ have

grown, as is evident by the increasing number of farmers markets. Buttressed by growing consumer interest, farmers markets are increasingly becoming an important source of livelihood for farmers in NJ. However, farmers markets are not reaching all consumers, especially those that lack access to fresh fruits and vegetables. While research on Direct-to-Consumer (DTC) marketing and local food systems is growing, most of it has been focused on understanding consumer perspectives and values. The purpose of this project is to understand farmer decision-making and behavior in DTC marketing channels. Our preliminary findings are based on interviews conducted during the spring months of 2017. Our findings reveal that there are costs associated with DTC marketing channels and that farmers are influenced by the uncertainty involved in setting up new marketing opportunities. The opportunity costs of entering new markets are high. Although farmers are interested in participating in programs that serve low-income consumers, they face administrative barriers in becoming part of these programs. These findings will serve to improve understanding of local food promotion.

Gregory Krupp and Lawrence McGlinn, SUNY New Paltz. *Georeferencing Historical Maps of New Paltz with LIDAR*. Many of the maps of New York that date back to the 1700's lack a proper coordinate system, making it impossible to accurately determine where these historic land divisions were situated with respect to the current geography. With this project, we georeferenced a collection of historical maps of the town of New Paltz in order to overlay them with modern maps. Additionally, we created maps of historical divisions that only exist as text, with no formal map of these divisions on file within Ulster County. The majority of the original land divisions were bounded by stone walls that still exist. In order to identify these, we used LIDAR data which strips away vegetation and shows high-resolution surface elevation and features. We accurately georeferenced the historical maps by cross-referencing the LIDAR data with historical texts regarding the land divisions. We found this method to be the most relevant given New Paltz's history and landscape, and this methodology can be applied in similar areas that are not highly developed and were originally surveyed predominantly with stone walls. In accurately georeferencing these maps, we can now provide historians and cartographers with data to contribute toward a greater understanding of the history of New Paltz.

Alexandra Logan, Syracuse University. *Effect of Sea Ice Loss on the Decline of Population Sizes in Ursus Maritimus*. Temperature magnification in polar marine regions is resulting in an accelerated decrease of sea ice. This raises the question of what will happen to population sizes and the survival of arctic predators such as polar bears which are the most ice-dependent of all the Arctic marine mammals. The World Wildlife Federation (WWF) recognizes nineteen polar bear sub populations, and only three are declining in size and one is increasing. In this study I examine whether the sub populations that are declining are in locations where sea ice loss has been greatest. Sea ice data were collected from the National Snow and Ice Data Center website. The polar bear sub population status data was gathered from the WWF website. I associated the sub populations data with a geographical location in excel, and transformed the excel sheet into a point shapefile that could be imported into ArcGis Desktop. I laid out the two sea ice polygon shapefiles on top of one another in ArcGIS Desktop, and then placed the sub population data on top of both sea ice data sets. Two maps were created. The first illustrates the relative locations of areas of loss of sea ice and the general size of the sub populations; and the second examines the relationship in the locations of polar bear subpopulation trends and trends in sea ice loss. Neither map shows a strong relationship between areas that are experiencing greatest sea ice loss and decreasing size of the population. Although sub populations are not dramatically declining in size, other studies have shown that the loss of sea ice is causing the polar bears that make these sub populations to become smaller in size, weaker, and produce fewer pups.

Jeffery Ludwig, The Nomad Group LLC. *Geographically Relating BMX Bicycle Frame Manufacturers with their Riders Through A Nationwide Survey*. Is there a common geographical relationship between BMX bicycle riders and their frame manufacturer? Are BMX riders buying from their local brand? The BMX rider may choose a specific frame manufacturing brand for a variety of reasons including unique dimensional qualities, price, locality to manufacturer hub, and more. This report attempts to identify the geographical relationships between the BMX bicycle rider and the bicycle frame manufacturer. The consumer data was analyzed to discover other reasons why the riders may have made purchases from certain companies including items such as geographic market advantages and brand loyalty. In this report, a literature review was performed to observe the economic methods of market segmentation to reveal techniques that the brands may have employed to increase sales across the United States. The methodology for this research began with obtaining consumer data by creating a survey with Google Forms. The survey was then presented on Facebook and Instagram with a brief description of the research and an attractive flyer. In addition, RideBMX and BMX Union, which are two of the most prominent BMX media platforms, have assisted in promoting the study by creating a link to the survey on the front pages of their websites. Once the data was collected, a geodemographic observation was made through exporting the information onto several maps utilizing ESRI's cartography software, ArcGIS 10.5. The maps reveal the population density of individual riders across the United States and distances from the bicycle frame companies.

Dean Nabsu, Neeraj Vedwan, Pankaj Lal, and Wolde Bernabas, Montclair University. *Lead Contamination in New Jersey: A Study of Perception and Response to Lead Risk Among Key Stakeholders*. Lead contamination and the hazards from exposure to lead are a growing concern for residents nationwide. Although the issue of lead contamination has gained public prominence in recent years, our knowledge of the array of factors preventing successful mitigation remains incomplete. The objective of this interdisciplinary research being undertaken by faculty and students from Departments of Anthropology and Earth and Environmental Studies at Montclair State University, is to explore the perceptions of lead risk among public health officials and other important decision makers in Northern New Jersey. Additionally, we will collect soil samples from several public locations (parks, playgrounds) to assess the lead levels in that area. Semi-structured interviews will be conducted with key individuals, including public health officials, school principals, and Board of Education members, to investigate if they perceive a lead contamination problem, and if (and how) they have addressed the problem of lead contamination (public outreach, enacted policies). Survey data will be analyzed qualitatively and quantitatively, and biophysical data will be used to create maps using Geographic Information Systems (GIS). We will then synthesize the social and physical data collected, to identify potential "hot spots" of lead contamination, with the ultimate objective of creating a public outreach program for those most vulnerable to lead contamination.

Gia Nguyen and Pankaj Lal, Montclair State University. *Exploring Places Based Opportunities for Bioenergy Sustainability Preliminary Findings*. Switchgrass has been identified as a potential biomass for bioenergy in Missouri. Their supply areas are varied, with differing ownership patterns, forest/agricultural conditions, and transportation corridors, allowing one to examine the differential importance of each of these factors on feedstock availability. The study aims to generate maps of switchgrass and switchgrass-forage crops in Missouri and pine, and of pine-switchgrass alley cropping overlaid with a system of roads and areas where no harvesting is allowed. The maps will incorporate existing wood mills or bioenergy conversion plants in the study site to help identify strategic spots where bioenergy conversion plants may be located. Information on existing mills will be obtained from the Ethanol Producer Magazine (EPM) bio-refineries map (EPM, 2015) and the USDA Forest Service (Forest Products Network, 2015). A Geographical Information System (GIS) supported methodology has been developed to assess the technical and

economic potential of biomass exploitation for energy production. Availability of biomass will be estimated using different supply radii (e.g., 40, 60, 80 miles) centered on each site to generate estimates of the total amount of feedstocks available from particular points. Land meeting biomass harvesting best management practices (BMP) requirements such as maximum slope where operations may take place (e.g., only areas of slope less than 35%) will be included in the analysis. This objective will be achieved via data collection (including satellite imagery analysis), literature research (to identify the suitability of climatic, topographic, soil, and solar conditions for each species of potential biofuel crops) and analysis in GIS to visualize the spatial distribution and feedstock suitability, and define conversion plants' effectiveness.

Oluwaseyi Olojo, Barnard College. *Exploratory Analysis of Infant Mortality Rate Integration in Social Vulnerability Assessments for Drought Afflicted Mexico*. Infant mortality rate (IMR), among other health indicators, can serve as a useful measure of social stratifications of wealth and economic prosperity. This indicator can be used in composite indices, which have been applied in many human-environment studies and have played a significant role in decision making within the public policy arena. For Mexico, a historically drought afflicted country, indices can serve as multidimensional tools of analysis for measuring social vulnerability to drought events. The aim of this project is to combine the climate vulnerability index described in the Intergovernmental Panel on Climate Change's 2001 report and Dr. Susan Cutter's Vulnerability of Places model into a holistic framework to understand how drought affects Mexican society. We explore the influence of integrating IMR into a drought vulnerability index. IMR data for the years 2000 and 2014 were obtained from the NASA Socioeconomic Data and Applications Center (SEDAC). We developed a composite vulnerability framework featuring three subindices (sensitivity, adaptive capacity and exposure), where IMR is assigned to the sensitivity subindex. For comparison, we will use Principle Component Analysis (PCA) to inform the design of an alternative drought vulnerability index. ArcGIS will be used to visualize the results of this exploratory analysis. With thanks for support from Drs. Susana Adamo and Malanding Jaiteh of CIESIN.

Fuad Olowo, Binghamton University. *Transportation Accessibility: Equity in Mobility for Vulnerable Population Groups During Economic Challenges; Practices and Possibilities*. Accessibility describes the ability to gain entry or access from a system or entity through the provision of resources available for use with ease and without challenges. Lapses of equality in transport policies including segregation of low-income groups in policy considerations, centralization of economic and social centers in urban centers and transport infrastructure inadequacy are the typical features of many sub-urban areas and other developing cities. Socio-economic indicators serve as a controlling variable of patterns, frequency and behavior of trips of socially dependent population groups. The research is carried out Syracuse, NY. It explicitly investigates how travel pattern of people with high dependency has changed, due to the dynamics in financial constraints to mobility has affected individuals irrespective of race, health status and cultural affiliation. It provides insight into the spatial distribution of physically dependent people's residential locations and inequity in government's provision of public transportation and other social facilities. Historical and Census data are analyzed to establish the level of equity in accessibility to transportation available to low-income and poor neighborhoods which constitutes the highest density of vulnerable population class. The results of the study reveal that the length of trips increases with the age and health status of people, while female travel considerably shorter distances than male. The research illustrates that the downtown and urban center of Syracuse offer better levels of accessibility than the city's local and remote neighborhoods. Also, there is a high degree of traffic and mobility attributable to the availability of public service centers and a large number of business concentrations. Key words: equity, accessibility, economic development, financial constraints, household income, commuting access and transportation.

Glenn Roedel, Kutztown University of Pennsylvania. *Hot-spot Analysis of Murals and Population and Income Variables in Philadelphia, PA*. Philadelphia is known as the “city of brotherly love,” as it has historically welcomed diverse communities of different cultures. The city is also a vibrant cultural center with important museums and impressive street art. Philadelphia’s Mural Arts Program has helped create hundreds of murals across the city. These murals often reinforce positive characteristics of Philadelphia’s diverse neighborhoods. The program was originally started in the 1980s by Jane Golden, a mural artist who wanted to inspire young people to express themselves artistically in lawful venues rather than do graffiti illegally. Based on GIS data from 2015 on murals sponsored by Golden’s program and U.S. Census statistics, I examined how socioeconomic variables (income, ethnicity, and population) relate spatially to mural density at the census block group level. I also went into the field in order to explore murals in the context of particular neighborhoods and have a better understanding of the patterns observed in the GIS analysis. I applied Lucas Anselin’s method to identify statistically significant spatial clusters of low and high values for the aforementioned variables. The mural’s program is intended to promote positive social changes within diverse communities. My results show that clusters of high density of murals are associated with both lower and higher income clusters as well as minority community clusters. Future research will entail examining demographic changes and possible gentrification linked to mural density in Philadelphia.

Nicholas Sapone and Joy Fritschle, West Chester University. *Fine-scale Ecotone Mapping Using GIS Technologies: A Case Study from Goat Hill Serpentine Barrens, Pennsylvania*. Fine-scale mapping of ecotones represents a set of challenges that differ substantially from mapping these transition zones between ecosystems at landscape scales. Typically, when ecotones represent a relatively abrupt change in lifeform, such as from grassland to forest, aerial photographs and satellite imagery can be heavily relied upon to define ecotone locations. However, additional GIS tools may need to be utilized when the study area is small and/or the ecotone transitions are difficult to distinguish on imagery due to problems with ground resolution, shadows, etc. Such was the case in mapping the grassland-savanna-forest ecotone boundaries at the Goat Hill Serpentine Barren Plant Sanctuary in Chester County, Pennsylvania. Goat Hill is part of the State-Line Serpentine Barrens complex, a scattering of serpentine barrens along the Pennsylvania-Maryland border. Serpentine barrens are highly biodiverse, globally rare ecosystems, and the State-Line complex of barrens represents the largest extent of serpentine barrens in the eastern United States. Due to many years of fire suppression, these barrens are being invaded by non-serpentine woody vegetation. Thus, there is significant concern with accurate mapping of ecotones at serpentine barren sites to facilitate management and ecological restoration. We were requested by a local stakeholder group, Friends of the Stateline Serpentine Barrens, to map the ecotones at an approximately 1.37ha site in Goat Hill. A group of students assisted us with mapping as part of a Field Methods class. Ecotones were mapped as polygon, line, and point features in the field using Smart Phones and Collector for ArcGIS. The students' data was organized using ArcGIS Online and ArcGIS Pro. This required an extensive decision-making process. This presentation illustrates the application of these GIS technologies for fine-scale mapping of ecotones.

Peter Scilla, SUNY Geneseo. *Contemporary Urbanism: A Spatial Analysis of the Northeast American Creative Class*. Scientists, economists, and geographers alike have long attributed the success of cities to the presence of large and stable industries. It was assumed that the optimal method for the socioeconomic advancement of the United States was through trade, manufacturing, and other basic industrial activities. However, a growing and increasingly diverse population of problem solvers and entertainers threaten to turn this traditional theory on its head. The creative class values inclusivity, vibrant cultural environments, and grassroots community development above all else. Richard Florida, urban geographer and pioneer of research on the creative class, defines its members as those who engage in work to create meaningful new forms. Namely, this novel community of critical thinkers does not only add vitality to a

city—it produces wholly new interpretations of it. I will use geographic information systems (GIS) to determine localized suitability levels for this budding community throughout the densely populated and dynamic American northeast. My research will be focused on 26 micropolitan and metropolitan statistical areas (MSAs) defined in the 2010 US Census. I have highlighted several key economic and institutional variables to analyze that are suggested to be attractors of the creative class: educational attainment; the presence of high-tech industry; and innovation (measured by the frequency of new patent applications). This data will then be implemented in a site analysis supplemented by statistical tests of spatial autocorrelation between metro areas ranking high in creativity and the existence of the aforementioned spatial variables. I theorize that inclusive locales containing the largest levels of innovation and creativity will experience the greatest economic payoff and, by proxy, be the most alluring to the rising American creative class.

Meagan Stone, SUNY New Paltz. *Geospatial Insights: Providing a Comprehensive Analysis of Safety on the SUNY New Paltz Campus*. Campus safety is a top priority for college campuses across the country. If students do not feel safe attending, or if parents do not feel comfortable sending their children to a particular campus, the university's student enrollment decreases and its mission to educate is compromised. This quest for a safe and welcoming campus can be hard to achieve for a number of reasons; the administration and police departments must balance privacy with protection, and freedom of speech and expression while trying to ensure and inviting, diverse and inclusive campus environment, to name a few. This research case study investigates the State University of New York (SUNY) at New Paltz, and its safety protocols through a comprehensive geospatial lens. Research methods include mapping the campus blue light emergency phones, conducting informal interviews with personnel from the office of student development, Title IX, telecommunications as well as the university police. Mapping the frequency, placement and accessibility of emergency resources on campus, as well as reviewing the unique insights provided by participants, shed light on the campus resources and education regarding student, faculty and staff safety. This study reveals that there are numerous avenues towards creating a safe and welcoming campus, and that at any one time these multiple and overlapping processes are both complex and complementary--and are necessarily responsive to the shifting local, statewide and national hot-button issues that are brought to campuses across the US.

Forest Swaciak, SUNY Geneseo. *Potential Climatic Impact of Bioengineered Crop Albedo Change in the United States*. This research determines the potential effects on global climate if bioengineered crops with higher albedo values are grown in the United States. Albedo is a measure of sunlight reflected off a surface and is denoted as a decimal value representing the percent sunlight reflected. Surfaces with a lower albedo reflect less sunlight and absorb heat, thus contributing to warmer surface temperatures. To counteract climate change through geoengineering, attempts to raise albedo are being studied, including through bioengineered crops. A 2011 USDA land cover dataset at 30-meter resolution was used to determine the total area of different crops. ArcMap 10.4 GIS software was used to determine the change in albedo and which states would experience the greatest albedo increases. States showing the highest potential albedo change from bioengineered corn and soy are Iowa (.16 to .19) and Illinois (.16 to .19).

Tao Tang, SUNY Buffalo State. *Analysis of the Spatial and Temporal Changes of Algal Bloom in the Lake Erie from 2013 to 2016 Applying Landsat 8 Satellite Imagery Data*. The objective of this research is to apply the imagery bands of Landsat 8 OLI sensor to analyze the spatial and temporal distributions of algal bloom in the summers of 2013 to 2016. The results of this research show the distribution patterns of the phytoplankton biomass in the lake based on reflectance. The results will be compared to those of other researches based on field measurements and modelling. A total of 28 scenes (frames) at four locations namely Buffalo, Cleveland, Sandusky, and Toledo were analyzed. Both the normalized difference

vegetation index (NDVI) model and the normalized difference water index (NDWI) model were applied to analyze the spatial distributions of concentrated phytoplankton biomass on the lake surface. K-Means unsupervised imagery classification were delineated as the algae bloom regions. The results indicate that the west and mid-west portion of the lake surface encounters high concentrations of phytoplankton biomass during the summers. The east end of the lake shows relative low concentrations. The clear temporal trend exists that the high concentration regions migrate from west end of the lake in the spring and early summer to mid-lake in the middle of the summer, and to the east end towards the end of summer. This trend follows the direction of water flow. According to the analyses of these datasets, the Lake Erie encountered very significant algal bloom in the summers of both 2014 and 2015. The highest concentration of phytoplankton occurred in the summer of 2015. Key words: remote sensing, algal bloom, Lake Erie, NDVI, NDWI, Landsat 8.

Zachary Young, Kutztown University of Pennsylvania. *The Changing Curbside of New York: Gentrifications Effects of Multi-modal Transportation*, Moira Conway. In many cities throughout the US, gentrification has brought new residential development in areas recently dominated by industrial uses such as manufacturing and warehousing. In an effort to promote urban manufacturing - and its associated local employment opportunities - other cities are actively updating zoning codes to promote mixed industrial-residential development. However, these new mixed-use areas present a challenge for transportation planning: how can urban streets provide a safe, livable environment for pedestrians and bicyclists while maintaining adequate freight access required to support industrial land uses? Designing and regulating streets for both pedestrians and trucks presents a major challenge. For example, the wide radii required for large vehicles to navigate a turn result in long crossing distance - and increased exposure - for pedestrians. Similarly, collisions between large vehicles and non-motorized travelers are extremely dangerous. While conflicts can sometimes be avoided by shifting freight activity to off-peak hours, loading and unloading activities can generate noise that may be undesirable near residential areas. Through mapping and spatial analysis of demographic, employment, network, and transportation activity data from a case study area in Brooklyn, New York, this project aims to characterize the changing conditions for multi-modal transportation in a mixed residential-industrial area, to identify specific conflict areas in terms of both land use and infrastructure, and to provide recommendations for improving street design and regulation to balance these incompatible uses.

Lightning Talk Abstracts

Jacob Baumohl, Temple University. *Gentrification in Coastal and other Non-Urban Communities*. Gentrification is a very popular and divisive topic at the moment amongst not only geographers and social scientists but also the public. Gentrification tends to be conceptualized as an urban phenomenon occurring as people of higher socioeconomic status move into lower socioeconomic neighborhoods and displace longstanding residents. However this process can also be observed in non-urban areas all over the world. I have sought to investigate non-urban gentrification, and to discern the commonalities and important differences between urban and rural groups being displaced via this process, in the hopes that this could contribute to a better understanding of spatial inequality. In this talk I will discuss several case studies that have become the basis of my research; vulnerable fishing communities in Maine, the sea-change phenomenon in New Zealand, communities of affluent squatters in Puerto Rico, and immigration fueled rural gentrification in Catalonia.

Jillian Eller, Temple University. *Liquor Store Locations in Philadelphia, Pennsylvania and Their Relation to Violent Crime Based on Seasonality*. The relation between liquor store locations and violent crime has been observed in great detail over the years. However, little has been done to show how this relationship differs throughout the four seasons. In this study, we observe the relation between liquor store locations and violent crime in the city of Philadelphia based on seasonality. Our study includes all 50 state-run liquor stores (called Wine & Spirits) in the city. We conducted a GIS analysis at the block group level to create choropleth maps illustrating our results. Using a linear regression, we regressed liquor stores on violent crime after accounting for demographic features including poverty, percent minority, and median age of males. Violent crime remained significant only in Summer and Fall months, suggesting that some social mechanism is involved in the relationship between liquor stores and violent crime. The implication is that warmer weather leads to more people outside, resulting in more possible criminals and victims. Our results suggest that there is, in fact, a relationship between violent crime and liquor stores, and that this relationship differs in different seasons.

Joseph Gallagher, Temple University. *Cod-motiv Fetish: British Fishers, Place and Brexit*. Studies of the European Commission's Common Fisheries policy frequently problematize its dislocation from coastal communities, lack of stakeholder participation and its neoliberal approach to managing common pool resources (Griffin 2010, Sawe and Hultsman 2014, Garza-Gil, M. D., Amigo-Dobaño, L., & Surís-Regueiro, J. C. 2017). However, the authority of institutions like the EC is being eroded and the rise of authoritarian populism on either side of the Atlantic has been attributed in part to a breakdown of globalized and neoliberal governing consensus (Davies 2017; Elliott 2016; Worth 2017). Geographers, meanwhile, have highlighted the complexity of recent events like Brexit and the necessity to explore multiple flows that constitute them (Bachman, V. & Sidaway, JD; Ingram 2016; McConnell, F., Kuus, M., Jeffrey, A., Crawley, H., Vaughan-Williams, N., & Smith, A. 2017). Gaining high visibility during the Brexit campaign, British fishers recently organized resistance against the EC's CFP. during the campaign for the Brexit referendum. By analysing media appearances and various texts produced by Fishing For Leave, a group of pro-Brexit fishers, I explore the nature of their critique of the CFP as well as how they make claims to UK-adjacent waters. Taking a relational approach, I seek to highlight the varied nature of their claims, which incorporate historical and territorial imaginaries, heritage, and economic justifications. My findings so far highlight a complicated relationship between place, nation and the sea, challenging the impulse to ascribe Brexit to any one process or motivations of a social class.

Kristen Homeyer, SUNY Geneseo. *Grassland Management in Caumsett State Park*. Grassland management techniques can positively affect the species biodiversity of a field ecosystem. Staff at Caumsett State Park have implemented manual and mechanical removal methods for invasive species as an alternative to herbicides. This more natural process for managing a 30 acre grassland area has slowly improved species composition by allowing native plant species to dominate and for the successful return of grassland birds. In addition, Caumsett State Park is the only known breeding site of Baltimore checkerspot butterflies on Long Island and the implementation of certain management techniques can positively or negatively impact the larvae of future butterflies. The management approach and resulting impacts on the grassland community will be presented.

Shannon Keane, SUNY Geneseo. *Ecotheology in the South Pacific*. The projected rate of climate change in this century is far more than anything experienced on Earth in the last 10,000 years. Rising levels of carbon dioxide and other heat trapping gases in the atmosphere have warmed the Earth and are causing significant impacts such as, rising sea levels; particularly in the South Pacific. Because the physical effects of climate change are prevalent throughout Oceania, a heightened sense of the value of life in the environment has become a prominent mentality. When discussing the impacts of climate change, culture

as a component is rarely mentioned. This is puzzling considering culture is directly impacted by geography. An important component of culture is the role of religion. When culture and religion are evaluated on an environmental basis, the result is ecotheology. Ecotheology becomes particularly important in the South Pacific, because the people of the Pacific understand that it is not by the hand of God that their land is flooding, they know it is human induced. It is with this understanding that The Pacific Churches Consultation was created and Otin Tai declaration was established. Both were created to try to make sense of their changing world. The value of culture lies in its ability to connect generations of people over time, while remaining flexible enough to interact with changing environmental and social conditions, which is key for the success of climate change policies. Evaluation of Oceanic communities is critical as climate change is quickly altering their cultures. How much change can a culture tolerate before it becomes a new entity?

Maric Kusinitz, Temple University. *Geographies of Sacred Space: A Meditative Exercise*. "Sacred space" is a term whose definition has changed alongside the architectural changes in the human landscape. A "structuralist" definition views sacred space as definitively separate and distinct from an everyday space (for example a church vs. a grocery store.) Certain feelings/actions can only take place in certain spaces. However, a transcendental definition views sacred space as a fluid concept- we can bring sacredness to any space we inhabit at the moment. As time passes, we are seeing an increase in infrastructure built for consumptional purposes rather than reflective purposes- thus this structuralist definition is slowly becoming obsolete. It is thus becoming imperative to bring the transcendental concept of sacred spaces into our everyday lives and to "re-enchant" our personal landscape, because the intention behind our built landscape is not wonder and mindfulness but distraction and complacency. Our daily lives are so routinized and seemingly mundane, it is imperative for us to find time and space in our daily routines to reconnect with ourselves- our body, mind, and reflect on our existence beyond the mental and physical tasks we are plagued with in order to survive in a capitalist society.

Veronica Medina, SUNY Geneseo. *GIS Analysis: Indiana Brown Bat*. On May 8th 1967, the Indiana brown bat (*Myotis sodalis*) was designated by the U.S Fish and Wildlife Service as an endangered species. Numbers have dwindled from just over 1 million to 530,705. The decline in *Myotis sodalis* population can be attributed to habitat loss and fragmentation, disturbances in hibernation caves and most recently, white-nose syndrome. The purpose of this research was to determine the most suitable maternity roost conservation areas for the Indiana brown bat within Jefferson County, New York. The choice of study area was based on availability of data and conservation priority. Through the use of Geographic Information Systems (GIS), potential conservation areas were determined. The five factors considered were distance from wind turbines, proximity to agricultural lands, proximity to wetlands, type of ecological zone and presence of conservation land. The suitability analysis identified 4 distinct areas that would best aid in the preservation of *Myotis sodalis*.

Ritapa Neogi, Temple University. *Colonialism and the Ecological Crisis of the Suez Canal*. Since its construction in the mid-1800's, Egypt's Suez Canal has been a source of international conflict, economic growth, and ecological turmoil. Because it regularly transports a large number of oil tankers from the Suez Port to Port Said, the canal is one of the most valuable waterways in the world. However, in linking the Mediterranean and Red Sea, the canal has caused hundreds of invasive species to migrate to the Mediterranean -- most notably invasive sea jellies. This has led to damaging effects on industries surrounding the welfare of the sea; for example, fisheries and tourism. In late 2015, despite these ecological concerns, the canal was expanded to include a parallel channel, allowing for two-way travel. While supporters envisioned positive transformations to Egypt's high poverty and unemployment rates, the expansion's possible long-term effects on the ocean and industries based on the ocean were neglected.

in discussion. My goal is to examine these ongoing effects and their consequences on humans whose livelihoods depend on the Mediterranean Sea as a resource, with a focus on how the influx of migrating species, specifically gelatinous zooplankton, have already affected fisheries, agriculture, and tourism. I also look at the eutrophication of nearby waters through chemical disposal from local factories, one of the causes of jellyfish blooms. While the Suez Canal has led to much economic growth for Egypt, the waterway's growing negative ecological effects may override its positive influences in the long run.

Chelsea Williams, Temple University. *Neoliberal Food Deserts*. The perpetuation of 'food deserts' in impoverished U.S cities is linked to the lack of fresh and healthy foods, found in areas void of commercial market providers. Working class African-American and Hispanic populations are more likely to live in food deserts because of the history of redlining and suburbanization. Due partly to the privatization of transportation, supermarkets are moving to spacious suburban areas. The inadequate and often, unreliable, urban public transportation services lead poor inner-city residents to conduct their shopping at corner stores, which often don't have fresh food options. With the retail industry rebounding from the last financial crisis, and focus shifting to a healthier America, questions remain over how to get healthy foods back to inner-city residents. Federal and state governments are creating initiatives to attract commercial food business back to low income communities. These grants and initiatives provide funding for urban businesses to open community gardens, farmers markets, and healthy corner stores, but do nothing to fix the underlying issue of why 'food deserts' are so prevalent. The idea of neoliberal food deserts stems from the idea that by building better food locations, the health of impoverished communities will improve, even as the financial initiatives to bring healthy food to these communities do not adequately address the underlying causes of food deserts.

Panel and Exhibition Abstracts

Wendy Lascell, SUNY Oneonta. *Grassroots-action building resiliency in New Orleans after Hurricane Katrina: Service-Learning experiences in a Disaster Geographies course*. During this panel focused on disaster geographies in New Orleans, participants will discuss their role in helping with recovery and building resiliency since Hurricane Katrina. Since May 2006, student groups from SUNY Oneonta have been assisting a grassroots non-profit, Common Ground Relief, which formed just days after Hurricane Katrina hit on August 29th, 2005. At first the focus of this non-profit was on recovery, but in the past 5 years the focus has shifted to resiliency in the form of wetlands restoration and building strong communities. Panel participants will share their experiences working with Common Ground through service-learning and other volunteer activities. They will also discuss the important role of smaller, local non-profits in disaster recovery. Recovery and resiliency at different scales will be addressed: from wetlands restoration in the Mississippi Delta to building rain gardens on individual residential lots in the Lower 9th Ward neighborhood.

Leonard Pyzynski, Onondaga Community College. *Stand Alone Geographers (SAGE)*. Discussion on the pros and cons of being a lone geographer at an institution of higher learning.

Ren Vasiliev, SUNY Geneseo. *ArtWorks: Art and Geography*. I am presenting an exhibit at Lockhart Gallery on Main St. Geneseo that contains pieces developed from the exploration of my surroundings.

Thank you for attending the 2017 Meeting - we hope to see you again next year!