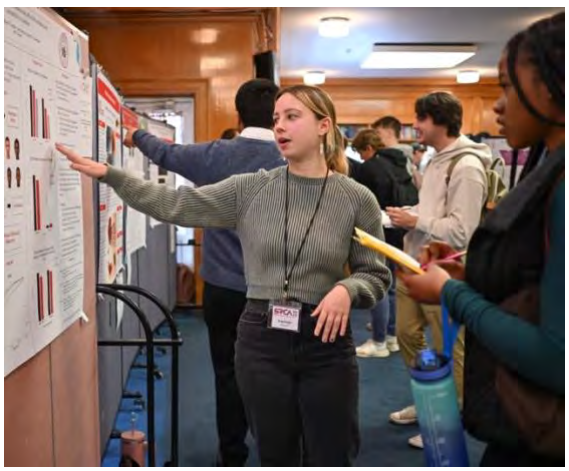
SRCA 2025

STUDENT RESEARCH & CREATIVE ACTIVITY

APRIL 16

HUNT UNION BALLROOM



SUNY ONEONTA

SUNY ONEONTA
STATE UNIVERSITY OF NEW YORK

2025 Student Research & Creative Activity Day

April 16, 9 AM – 5 PM

Hunt Union Ballroom

Sponsored by:

University Foundation, Inc.

Office of Alumni Engagement

The Faculty Center for Teaching, Learning & Scholarship

Division of Academic Affairs

2024/25 University Senate Committee on Research

Tracy Betsinger, Chair (Anthropology)
Suriati Abas (Elementary Education & Reading)
Jeffrey Heilveil (Biology)
Junryo Watanabe (Biology)
Chein-Wei (Wilson) Lin (Business)
Audrey Porsche, ex officio *(Faculty Center)*

suny.oneonta.edu/faculty-center

STUDENT RESEARCH & CREATIVE ACTIVITY

PROGRAM

Hunt Union Ballroom

Wednesday, April 16, 9 am–5 pm

Posters, computer displays, and other exhibits spotlighting student research and creative activity projects from across the disciplines (see abstracts)

April 16, 12:00 NOON–1:00 PM in Ballroom

Luncheon and Keynote Address **(registered guests only)**

Scott Salmirs '84

President & CEO, ABM Industries

"How to Find a Job and Navigate a Career Path"

Salmirs discusses ways to get a job and how to succeed in the workplace and keep moving up. As President and CEO of ABM Industries, a Fortune 500 leader in facility and infrastructure solutions, he strengthened its position as one of the largest facility services providers on the New York Stock Exchange. ABM delivers mission-critical solutions across diverse industries, including commercial real estate, aviation, healthcare, technology, and entertainment, ensuring operational efficiency and sustainability for its clients. Salmirs is also deeply committee to service and philanthropy and is actively involved in several nonprofits in New York and globally.

Annual Student Juried Art Exhibition

Visit the Martin-Mullen Art Gallery in the Fine Arts Building to view works by student artists, featuring sculpture, ceramics, digital prints, drawings, paintings and video art

~on display through May 3~

STUDENT PARTICIPANTS

(G) = Graduate student

FACULTY SPONSORS

STUDENT RESEARCH & CREATIVE ACTIVITY

PRESENTATION SUMMARIES

Key: (G) = Graduate Student

☼ = Designated as sustainability-related by the President's Advisory Council on Sustainability

= Designated as related to diversity/equity/inclusion by the President's Council on Diversity

★ = Supported by the Student Grant Program for Research and Creative Activity
(funded by the University Foundation and the SUNY Oneonta Alumni Association; facilitated by the Senate Committee on Research and the Faculty Center)

Student: Colby Aaron
Faculty Sponsor: Arienne McCracken (Human Ecology)

Footwear Design ★

In this independent study, I will design and build two pairs of lifestyle shoes, exploring the entire footwear design process. I will start by researching trends, materials, and ergonomic principles to develop unique concepts. Through sketches, digital renderings, and hand renderings, I will refine my ideas and experiment with different silhouettes, colors, and textures. Once the designs are finalized, I will construct the shoes by selecting materials, creating patterns, and assembling them using cutting, stitching, and sole attachment techniques. This project will help me develop my design, rendering, and craftsmanship skills while gaining hands-on experience in footwear production.
Presenting Wednesday 4/16 1-5pm

Student: Arpitha Abraham
Faculty Sponsor: Wendy Lascell (Geography & Environmental Sustainability)

Call to Action: Community Clean-Up of the Hudson River ☼

The Hudson River is plagued with PCBs (Polychlorinated Biphenyls) which negatively impact the local human populations as well as many native plant and animal species who rely on the river for food and habitat. The river and estuary system is an important ecological source in New York State. After a mass dumping of PCBs by General Electric and subsequent cleanups, the river remains heavily contaminated. This project aims to work with the communities in the Lower Hudson Valley to gather and call for a sustainable, mass cleanup of the river. This campaign will spread information on the dangers of the current state of the river as well as a comprehensive list of actions that can be taken to urge cleanup by the EPA and GE. Large community efforts calling for action have proven useful in the past particularly regarding the Hudson, and the call to action is imperative to the sustainability of the local ecosystem.
Presenting: Wednesday 4/16 9am-1pm

Student: Madelynn Ackley (G)
Faculty Sponsor: Jeffrey Heilveil (Biology)

Finding the Goldilocks Zone: Determining the Minimum Sample Size to Represent a Population

★☼

In this study I explored the genetic diversity of the caddisfly *Rhyacophila fuscula* (Walker) at the cytochrome oxidase I gene. When looking at a population, it is crucial to have a sample size that is large enough to see patterns in the population that may be able to help explain historical events, while not taking so many individuals that it negatively impacts the population. To determine the minimum sample size, I collected 138 *R. fuscula* individuals from Cripple Creek (42.82358 -74.9003) and brought them back to the lab where I performed DNA extractions, PCRs, gel electrophoresis, DNA purifications, and then sent the samples to be sequenced. I have obtained sequences for 136 individuals (revealing 17 unique haplotypes in the population). Using my genetic data, I created a haplotype accumulation simulation to determine the minimum sample size needed to represent this population.

Presenting: Wednesday 4/16 9am-1pm

Student: Symon Andriyevsky
Faculty Sponsor: Ashley Cooper (Art)

12 Portraits of SUNY Oneonta Students Utilizing Color Theory ★

This project is meant to represent the vast diversity of students that attend SUNY Oneonta. Students of different races, gender identities, sexualities, ages, student type, and geographical backgrounds were represented in this project. The project was painted using GOLDEN fluid body acrylic paints, which would not be possible without the grant, as these paints' high quality is represented equally by the high price. Each portrait took from 2 to 4 hours to complete, focusing on different colors and values while referencing photos taken of the subjects from different angles. Each portrait has its own unique color scheme, ranging from monochrome, analogous, tertiary, and tetradic. Despite each of these color schemes, however, the paintings all fit together harmoniously, as well as all of the different students on campus. Working on this project allowed me to experiment with these new paints, as well as appreciate the vast diversity of students that attend SUNY Oneonta. Each of these students have a unique viewpoint on life that is based on their background and their future career path that they have chosen for themselves, and I am honored to be able to represent this through the SUNY Research Grant and as an artist.

Presenting: Wednesday 4/16 2-5pm

Student: Alex Allen (G)
Faculty Sponsor: Daniel Stich (Biology)

Sustaining White Birch Lake: Analyzing Water Quality and Stakeholder Concerns ☼

White Birch Lake is a private man-made reservoir located in Broome County NY, two miles south of Windsor, NY. White Birch Lake is a small 29-acre eutrophic lake that sits in a 432-acre catchment in the Susquehanna River Watershed. In recent years, stakeholders have become concerned about the changes in water quality, high input of sediment, excessive plant growth, and the future management of this important resource. The White Birch Lake Association participated in the New York State Citizen Statewide Lake Assessment Program (CSLAP) for seven years. Through this program, stakeholders collected water samples and information like Secchi depth multiple times during the summer to help inform future management. The goal of this project is to collect limnological data to help better understand the current state of the lake and examine stockholder concerns. To do this, we will collect and analyze new and historical data to create a comprehensive state of the lake report and management plan for the future.

Presenting: Wednesday 4/16 9-10am

Student: Amanda Balich Metakis
Faculty Sponsors: Nathan Asman (Music), Wendy Lascell (Geography & Environmental Sustainability)

Nature's Harmony: The Sound of Environmental Data ☼

Data sonification offers a unique perspective to the Earth's systems in an immersive way. Data sonification is the process of converting data into sounds, allowing audiences to understand information through auditory representations. This research aims to provide an artistic sensory experience that complements traditional visual representations by translating weather data into music. I will be taking weather data from the Perna Science Weather Station and mapping this data onto MIDI (Musical Instrument Digital Interface). MIDI is a communication protocol that allows electronic musical instruments and computers to communicate in order to produce sound. By offering an alternative method to interpret and indulge in climate science, data sonification offers value for accessibility needs, scientific analysis, and public engagement. Utilizing data sonification nurtures a space for audiences to develop a deeper connection and appreciation for the Earth through music that represents real raw data points derived from ever-changing environmental systems. Science communication is vital for promoting scientific literacy, building community trust in research, and addressing environmental issues.

Presenting Wednesday 4/16 9am-1pm

Students: Jack Beemsterboer, Conor Brandt, Meg Hosie, Peyton Legg, Justin Maroney, Tonette Seitz (Gs)
Faculty Sponsor: Cynthia Falk (Cooperstown Graduate Program)

Blueprint for the Future: The Benefits of Historic Preservation ☼

This project explores the many benefits of historic preservation through the lens of the Richfield Springs Bank Lofts rehabilitation project. As a result of this rehabilitation, the historic and long vacant 1883 First National Bank building in the Village of Richfield Springs, New York, now houses nine market-rate apartments. Historic preservation can invigorate the local economy through job and tourism growth, benefit the planet through sustainability initiatives, and enrich the community through the preservation of cultural heritage. The project also examines the future dividends of historic preservation, which include increased property values, decreased effects from housing shortages, and fewer carbon emissions. The poster takes the form of a floor plan from one of the apartments created in the Richfield Springs Bank Lofts rehabilitation project, providing a visual backdrop to the example discussed.

Presenting: Wednesday 4/16 9am-1pm

Student: William Benedict (G)
Faculty Sponsor: Daniel Stich (Biology)

Measuring the Ecological Value of Hudson River Tributaries ☼

Approximately 65 major tributaries link the lower Hudson River to its terrestrial watershed through 3,600 total river miles. At least half of these are blocked by natural geomorphic features making them largely inaccessible for most migratory species. Most of the remaining creeks that once provided critical spawning habitat for migratory species are blocked by obsolete dams that deny biotic connection with the mainstem Hudson. Mile-for-mile, Hudson River tributaries are extremely productive, however many have not been characterized in this regard relative to restoration potential. The goal of this project is to measure the ecological value of ten tributaries to the Hudson River Estuary through the lens of biological productivity at multiple trophic levels. We will assess primary production by collecting diel dissolved oxygen measurements above and below the first barrier in each tributary. From these measurements we can estimate primary production which allows us to quantify productivity at the base of the food web. Invertebrate sampling will be completed using a Surber sampler in each tributary. Three samples will be collected in a haphazard fashion based on local habitat availability above and below the first barrier. A Biotic Water Quality Index will be

calculated for each sample, along with the standing crop biomass, density, and EPT index. Finally, we will assess the American eel population in each tributary utilizing multi-pass depletion electrofishing surveys at sites corresponding with primary production and invertebrate sampling. The number of eels captured will be used to generate population estimates for each site. These combined sampling efforts will give us a comprehensive understanding of the biological productivity of Hudson River tributaries. This information will enable government agencies and environmental organizations to focus restoration efforts within tributaries that contain habitat with high biological productivity.
Presenting: Wednesday 4/16 1-5pm

Student: Emmett Bird
Faculty Sponsors Rachel Kornhauser (Office of Sustainability), Wendy Lascell, Jacob Warner (Geography & Environmental Sustainability)

Food2Energy: Analyzing the Sustainability Value of Grind2Energy at Oneonta ☼
Food waste is a global problem. Local innovations include the Grind2Energy (G2E) food digester installed at the SUNY Oneonta dining halls in 2024. It takes organic food waste and turns it into useful products such as fertilizer and electricity. The G2E system has been a success, but it needs more awareness to highlight its benefits and promote future sustainability efforts. This project analyzes waste data from before and after the G2E installation, with a focus on emissions, economic impact, human labor, and waste production. The end products will be presented with a poster, infographic, and a video. Expected findings include lowered emissions, reduced need for human labor and exposure to waste, financial savings, and potentially lowered waste amounts. If confirmed, these results could help to support future expansion of G2E waste treatment on campus along with highlighting the success of the G2E installation. Displaying the success of G2E at Oneonta could act as a model for other institutions to increase sustainable waste management.
Presenting: Wednesday 4/16 9am-1pm

Student: Abigail Bishop (G)
Faculty Sponsor: William Walker (Cooperstown Graduate Program)

CGP Community Stories: Triage, Archive, and Digitization ☼ 
In 1964, Cooperstown Graduate Program (CGP) students began undertaking community-based research and collecting, concentrating on the documentation of rural life, agricultural practices, traditional arts and crafts, folk music, and ethnic cultures through interviews with upstate New York residents. For decades, the CGP Archive was housed in the NYSHA Research Library in Cooperstown, NY. CGP maintained a working partnership with NYSHA from the program's founding in 1964 to 2020 after NYSHA changed its charter to become the Fenimore Art Museum. In 2023, SUNY Oneonta secured the transfer of the CGP Archive to Milne Library. Thanks to the combined efforts of Milne Library staff, CGP faculty, and students, the archive has been packed and moved and is currently being re-housed in its permanent location. As part of my graduate assistantship, I have been responsible for scheduling meetings regarding the collections, aiding in the organization of the new archive location, leading a student team in counting and relocating materials, and contributing to a grant proposal aimed at digitizing part of the oral history collection. Additionally, I have archived the latest oral histories and fulfilled requests from external researchers. This work will ensure that SUNY Oneonta students, faculty, and outside researchers will have access to these important records in the future.
Presenting Wednesday 4/16 1-4:30pm

Student: Lizette Bishop
Faculty Sponsor: Michael Faber (Psychology)

Parasocial Relationships with Media Characters: Who do We Like to Like?
A parasocial relationship (PSR) is an emotional relationship that one develops towards an unattainable media character. PSRs have been organized into three "orders" which involve different

types of media characters (Giles, 2002). The first order involves real people: celebrities, news or radio personalities, authors, directors, etc. The second order involves fictional characters played by a real person (e.g., Walter White, Gloria Pritchett, etc.) where an individual cannot interact directly with the character but may interact with the actor or actress playing them. The third order typically includes animated characters, game characters and literature figures: Marge Simpson, Mario, Holden Caulfield, etc.: these are characters with whom direct interaction is impossible. Although early explanations suggested PSRs develop as an alternative to actual interpersonal interaction (Rosengren & Windahl, 1972), it has been established since then that PSRs are a normal part of media consumption and are quite common. However, there is still much to learn about who develops PSRs with what types of characters, and why. The current research examines patterns in the three PSR orders between people with Autism Spectrum Disorder (ASD) and neurotypical populations. People with ASD may experience difficulties understanding and interpreting social stimuli, making it hard for them to develop relationships with other people in their lives who may be unpredictable (Anderson et al., 2023). Most media characters, however, are written in a way that communicates predictably and efficiently to influence viewer perception (Meyrowitz, 1982) which may guide people with ASD, making it easier to develop relationships with media characters. Participants (N = 413) in this study completed a 91-item anonymous questionnaire administered through Qualtrics, first identifying a media character very familiar to them and then answering questions about their overall parasocial relationship with the character (Rubin & Perse, 1987; Rubin et al., 1985) as well as numerous other social behavior and personality constructs, including autism status and empathy-relevant questions similar to those developed by Cohen and Wheelwright (2004). Building on previous findings that people with ASD experience significant empathy deficiencies compared to those without, I hypothesize that (H1) people with ASD will develop first order PSRs less commonly than neurotypical people and that (H2) people with ASD will form more second-order PSRs than first-order PSRs. Finally, empathy deficiencies in ASD populations should persist measurably in parasocial relationships (H3). Implications of these analyses will be discussed, as well as a critique of Giles' (2002) three-order framework as it excludes characters with multiple versions spanning several orders (e.g., Harry Potter, Spiderman, etc.).
Presenting: Wednesday 4/16 9am-1pm

Student: Marie Box
Faculty Sponsor: Fred Zalatan (Biology)

Ty1 on a Vesicular Voyage: Is Clathrin the Captain?
A transposon, also known as a jumping gene, is a segment of DNA that moves from one location in a genome to another. Transposons cause mutations, alter gene expression, and contribute to genome evolution. Ty1, a transposon in Saccharomyces cerevisiae (baker's yeast), follows a copy-and-paste mechanism, where it is transcribed into RNA, reverse-transcribed into DNA, and then inserted into a new location in the genome. This process, termed retrotransposition, has similarities to retroviral replication, making Ty1 an useful model for studying retroviruses. Recent studies from our lab suggest that Clathrin, a cellular protein, may regulate Ty1 mobility. Clathrin is essential for endocytosis, a process in which a cell takes in external materials by folding its plasma membrane inward to create a vesicle that transports substances into the cell. Results presented in our project support the idea that reducing the cellular level of Clathrin reduces Ty1 transposon mobility.
Presenting: Wednesday 4/16 3:30-5pm

Student: John Breen
Faculty Sponsor: Christopher Karmosky (Earth & Atmospheric Sciences)

Wind Energy Climatology on the SUNY Oneonta Campus ☼
This presentation will be showcasing the work done, and the results found, during an independent study focusing on the wind climatology on the SUNY Oneonta campus. Using the Perna Science building weather station, and the years of data it has collected and is still collecting, multiple averages

and relationships are the results of data analysis and interpretation. Using data from the previous fourteen years, average wind speeds per month, highest gust values, and total time where there was no wind were all interpreted through graphs created and analyzed. With this information, there could potentially be an impact on building a windmill on campus, especially if findings show high winds, which could benefit the SUNY Oneonta campus through a renewable energy source. The analysis process of determining wind patterns over the fourteen years will also be presented on the poster, which can give insight into how those patterns have changed over time, ultimately relating to climate as a whole. From weather patterns on the SUNY Oneonta campus to the issue of climate change, this presentation allows for discussions to be started based on renewable energy, changing climate, and the weather patterns and interpretations derived from the weather station atop the Perna Science building.
Presenting: Wednesday 4/16 1-5pm

Student: Emily Bulmer (G)
Faculty Sponsor: Paul Lord (Biology)

Susquehanna (NY) Brook Floater (*Alasmidonta varicosa*) Population and Habitat Assessment ☼
Previous freshwater pearly mussel surveys of Catatonk Creek identified an expanding population of Brook floaters. This New York State threatened freshwater pearly mussel is found as far north as Eastern Canada and as far south as Georgia along the East Coast. A low head spillway dam removal in 2020, immediately upstream of this population, was a cause for concern for the established Brook floaters in Catatonk Creek. Our 2024 survey of Catatonk Creek assessed the status of this population of Brook floaters four years post dam removal. In this survey, over 650 Brook floaters were identified and tagged. Because this population is constrained by habitat, there are concerns this location will approach or already has reached maximum capacity. We performed habitat assessments and collected data on physical stream characteristics and water quality, which will help to ascertain what makes this habitat favorable to this threatened species. Physical and chemical stream characteristics surveyed include water temperature, nutrients, conductivity, mesohabitat, benthic composition, pH, and suspended sediment. Results of habitat data analyzed will be discussed. Assessing the habitat of these mussels and other local stream habitats will assist in developing a plan to conserve and, possibly, expand this imperiled population of Brook floaters.
Presenting: Wednesday 4/16 9am-1pm

Student: David Butler
Faculty Sponsor: Alex Sotola (Biology)

Genomic Hybridization Dynamics in *Lepomis* Populations of Otsego Lake ☼
Hybridization is a key evolutionary process that influences genetic diversity and species adaptation, particularly in freshwater fish populations. This study investigates the genomic structure of *Lepomis*(sunfish) populations in Otsego Lake, examining hybridization dynamics among Bluegill (*Lepomis macrochirus*), Redbreast (*Lepomis auritus*), Green *(Lepomis cyanellus*), and Pumpkinseed Sunfish (*Lepomis gibbosus*). Using Principal Component Analysis (PCA) and genomic clustering methods, we identified distinct genetic groups and inferred patterns of hybridization between *Lepomis* species. Entropy-based admixture analysis revealed multiple genetic clusters, indicating the presence of hybrid individuals and potential gene flow among populations. Additionally, genome-average ancestry and interpopulation ancestry analyses were used to classify hybrid classes and assess the directionality of hybridization. To further quantify introgression, we employed D-statistics and Bayesian genomic cline analysis, which will provide statistical support for gene flow, or introgression, between species. Our findings contribute to understanding how hybridization impacts population structure and biodiversity, providing valuable insights for managing *Lepomis* populations in Otsego Lake. These results underscore the importance of genomic monitoring in maintaining ecological stability and supporting sustainable recreational fisheries.
Presenting: Wednesday 4/16 9am-1pm

Student: John Castagna
Faculty Sponsor: Kiyoko Yokota (Biology)

The Effect of Temperature on Mealworm (*Tenebrio molitor*) Activity ☼

Temperature plays an important role in regulating the physiological and behavioral processes of ectothermic organisms, including mealworms (*Tenebrio molitor*). Ectotherms rely on external heat sources to regulate their metabolic activity, which directly influences their movement and overall behavior. This study aimed to determine how temperature affects mealworm movement by measuring the time required for each mealworm to move across a fixed 5 cm track under three different temperature conditions: cold (~15°C), room temperature (~22°C), and warm (~37°C). It was hypothesized that mealworms exposed to higher temperatures would exhibit faster movement due to an increased metabolic rate, while those in colder environments would move more slowly. To test this hypothesis, one hundred mealworms were randomly assigned to one of the three temperature conditions, with fifty individuals per group. Each group was acclimated to its respective temperature for 24 hours before testing. Movement speed was calculated by recording the time taken for each mealworm to move across the designated track. Average time was calculated for each group and data analysis was conducted to test for significant differences. The results revealed a noticeable relationship between temperature and mealworm movement speed. Mealworms in the warm condition showed the fastest movement, completing the 5 cm track in an average time of 13.02 seconds. Mealworms kept at room temperature moved more slowly, averaging 18.05 seconds. In the cold condition, movement was significantly slower, with an average time of 36.08 seconds. These findings suggest that higher temperatures promote greater movement, likely due to an increase in enzymatic activity and metabolic processes, while lower temperatures suppress activity by slowing metabolic function. This study supports previous research indicating that ectotherms experience a direct correlation between temperature and mobility. Even though the results were consistent with expectations, minor experimental errors, such as slight variations in mealworm handling and potential fluctuations in temperature exposure, may have had an effect the findings. Future research could explore additional temperature ranges or behavioral responses, like feeding activity, to gain a more comprehensive understanding of how environmental temperature affects mealworm physiology. The implications of this study extend beyond mealworm behavior, offering insight into how temperature influences ectothermic organisms in different ecosystems. As global temperatures change due to climate change, understanding how insects and other ectotherms respond to temperature variations can provide valuable information on species adaptation and survival.

Presenting: Wednesday 4/16 9-10am

Student: Cassidy Celic
Faculty Sponsors: Rachel Kornhauser (Office of Sustainability), Wendy Lascell (Geography & Environmental Sustainability)

Helping Manage Discarded Textiles: Red Dragon Thrift Store ☼

New fashion trends come and go frequently, contributing to overconsumption of textiles. These textile trends lead to overproduction, pollution, and work negatively against sustainability goals. College-aged adults are a target population group for change, as they regularly purchase new textiles and décor for their dorm rooms. Most textiles go completely unused after the end of the school year and are thrown out; ultimately ending up sitting in a textile dump. Keeping the Sustainability Development Goal #12: Responsible Consumption and Production in mind, this study focuses on assisting efforts of the Office of Sustainability at SUNY Oneonta by researching ways to sustainably donate and reuse large amounts of textiles. Finding places to donate textiles will greatly help the on-campus thrift store, run by the Office of Sustainability. The Red Dragon Thrift Store provides a place for students to donate discarded textiles as well as shop for gently used items. Sometimes the thrift store has more textiles than they can handle so they need places to sustainably donate these excess

garments. Expected results for this research will be around three to five plus sustainable donation sites to give to the Office of Sustainability; in hopes of finding new donation sites.
Presenting: Wednesday 4/16 9am-1pm

Student: Hayley Champlin
Faculty Sponsor: Gregory Fulkerson (Sociology)

Silence in the Street: A Dive into Vacant Housing ☼

This study aims to identify the processes contributing to excessive vacant housing, including the phenomenon of hyper-vacancies, which disrupt local neighborhoods and communities (Mallach, 2018). By conducting statistical analysis using secondary data from The American Community Survey, the study will explore correlations between various socioeconomic indicators and housing vacancy rates. We will analyze the factors that contribute to the presence and absence of vacant houses. Through examining the relationship between economic conditions, social indicators, and housing vacancy patterns, we will attempt to show the key variables predicting vacancy rates. Past research shows that vacancy rates decrease in economically prosperous areas, while they tend to be higher in impoverished areas or those dependent on seasonal housing. This study will consider these economic trends' impact on housing availability including employment rates, median income, neighborhood stability and a focus on homelessness. Additionally, by analyzing these factors, the study will provide a better understanding of vacant housing, focusing on its effects on communities, homelessness, and local economies. This research study will explore implications of vacant housing, particularly in areas that face chronic or seasonal vacancy issues.
Presenting: Wednesday 4/16 9am-1pm

Student: Zoe Connolly
Faculty Sponsor: Nicholas Benson (Communication & Media)

Campus Romance

This photography project explores the theme of reflection, both literally and figuratively, through a series of images captured on the SUNY Oneonta campus using an iPhone. Inspired by Kathy Ryan's Office Romance series, the assignment is meant to create a thematically coherent visual story through a series of juxtaposed images. This series focuses on reflective surfaces found in everyday campus environments, such as windows, puddles, and glass. The images aim to invite viewers to look beyond the surface and consider the deeper meanings and perspectives that reflections can offer. The concept of reflection goes beyond the pure visual aspect, embracing how we perceive ourselves and the world around us. These images highlight how familiar places can be transformed when viewed through a reflection, revealing often overlooked details. As a student navigating the daily routines of life, moments of quiet reflection can be rare. This project seeks to capture those instances and reveal a hidden beauty within the ordinary. Through these images, the project tells a story about the nature of perception. What we initially see is not always the complete picture, and by taking a moment to reflect on our surroundings, we can gain a greater understanding. The series encourages viewers to pause and consider their own reflections, both physical and metaphorical within their daily lives. Even in the fast pace of life, moments of reflection can reveal unexpected beauty and significance in the most meek places.
Presenting: Wednesday 4/16 noon-1pm

Student: Jessica Davis
Faculty Sponsor: Leah Bridgers (Math, Computer Science, Statistics)

Creating Math Tutorials

As a secondary math education major, I am interested in the way students learn math as they enter college. For this project, we created math tutorials for foundational math concepts used across secondary and higher education. We selected curricular topics by surveying the Math Department to determine what math skills could most benefit from the use of supplemental materials. Based on the

survey data, we began creating materials for Trigonometric Functions and Factoring Polynomials. These tutorials consisted of written portions, examples, practice problems, and interactive technology explorations involving Desmos. The goal of this project is to provide undergraduate math students with resources they can use to review and practice foundational math concepts required for their education.
Presenting: Wednesday 4/16 1-5pm

Student: Grace DeClerck
Faculty Sponsor: Fred Zalatan (Biology)

Jumping Genes in Action: RNA Synthesis and Ty1
Transposons are DNA elements capable of replicating and relocating within the genome through a "copy and paste" mechanism. Ty1 is a transposon found in baker's yeast (*Saccharomyces cerevisiae*) that encodes a small set of proteins essential for its replication. In addition to its own proteins, Ty1 relies on several factors encoded by the yeast genome. Our research focuses on the role of components within the endomembrane system and their potential involvement in Ty1 assembly and replication. A key objective is to assess Ty1 RNA levels in at least two mutant strains with alterations in the endomembrane system. To achieve this, we are employing quantitative polymerase chain reaction (qPCR) for precise RNA analysis.
Presenting: Wednesday 4/16 1-5pm

Student: Sofia Delgado
Faculty Sponsors: Maria Chaves-Daza, Roberto Rincon (Africana & Latinx Studies)

Environmental Migration in Mexico: A Literature Review ★☼
Climate change has become one of the biggest issues facing humanity in the 21st century. Mexico is a susceptible area due to its diverse climate, ranging from tropical to semi-arid; the direct result of climate change in Mexico is often droughts. Much of the population relies on water for agriculture whether it be working in farms, subsistence farming, or rearing livestock. Drought conditions affect the livelihoods of those who rely on agriculture and have become a push factor for immigration. This paper aims to examine and comprehend the relationship between droughts caused by climate change and immigration patterns in Mexico. In order to analyze this relationship primary and secondary research was evaluated and concluded that the lens which we view immigration and climate change needs to change as immigration caused by climate changes continues to increase. This research brings together these two areas of current research and aims to provide data to inform policy on climate, migration, and U.S. and Mexico relations.
Presenting: Wednesday 4/16 1-5pm

Students: Blake Dieckmann**,** Kelly Acen
Faculty Sponsor: Jill Fielhaber (Biology)

Characterization of PRE-Riboswitch Mutations
The 2024 Oneonta iGEM teams' project, pHISH and CHIPS, sought to develop genetic elements that would allow for the real-time pH adjustment of wastewater from semiconducting manufacturing plants. As part of this work, the team constructed a reporter circuit which utilizes a riboswitch (PRE) that can be used to regulate expression of genes in response to basic pH. During the sequencing analysis of the PRE riboswitch, we noted that the wildtype was lost and only mutated variants, each of which contained multiple nucleotide mutations, and impacted function were identified. The aim of our project is to further explore these mutations. To do this, we are using site directed mutagenesis to restore individual mutations to the wild-type version, so that we can characterize how each observed mutation contributes to the function of the riboswitch.
Presenting: Wednesday 4/16 9-10am

Students: Jena Dookie, Alexia Darby
Faculty Sponsor: Jill Fielhaber (Biology)

Growth Studies Using pH Responsive Genetic Elements ☼

This project seeks to explore the effectiveness of pH-responsive genetic elements in governing the expression of reporter genes across different pH levels. The 2024 iGEM team, pHish and Chips, has designed reporter constructs that regulate gene expression in response to alkaline (PRE riboswitch) and acidic (pARS promoter) conditions. Introductory experiments suggest that these elements exhibit differential expressions when used to transform E. coli, which are cultured in media with varying pH levels (3.5-9.0). The aim of this research is to further investigate how the PRE riboswitch and Pars promoter behave in acidic and basic environments and to assess whether both devices can be expressed concurrently, exhibiting pH-dependent regulation of gene expression.
Presenting: Wednesday 4/16 1-5pm

Student: Christopher Dorce
Faculty Sponsor: Ronald Bishop (Chemistry & Biochemistry)

Synthesis and in Silico Studies of Merocyanines Incorporating Piperonal for Medicinal Chemistry Applications

The distinct aims of these studies were twofold. The first was to synthesize, purify, and characterize a pyridinium piperine analog: 4-[(1E)-2-(2H-1,3-benzodioxol-5-yl)ethenyl]-1- methylpyridin-1-ium iodide (MBPI) for potential use in medicinal chemistry. The next aim was to investigate this molecule using computational chemistry techniques. Our research team is pioneering a novel medicinal chemistry approach to pain control. Stimulus-induced (nociceptive) pain is triggered in nerve cells by a special protein: TRPV1, also called vanilloid receptor 1. This protein is a member of the transient receptor potential (TRP) family of ion channels. Chemical structures of compounds known to activate or deactivate this receptor (and trigger or suppress pain), suggested to us that the agonist piperine (the active ingredient in black pepper) and some receptor antagonists had molecular shapes that a class of molecules could mimic called merocyanines. Piperine has been used with limited success to treat various ailments, including chronic pain. Obstacles include limited bioavailability and relatively modest binding to therapeutic target proteins such as TRPV1. We are interested in exploring piperine derivatives that could address these two obstacles. Merocyanine dyes have peculiar abilities to "tune" surface characteristics to their environments (e.g., solvents in which they are dissolved). Therefore, they might offer unique abilities to shape-shift upon protein binding (where they leave the cell's watery environment to dissolve in greasy protein folds). We have begun to design and prepare potential antagonists for TRPV1, using *in silico* methods to help identify and design target molecules. MBPI was prepared using organic synthesis and analysis methods, recrystallized from ethanol and/or water, and analyzed by Infrared and Nuclear Magnetic Resonance spectroscopy, as well as physical solvatochromism studies.
Presenting: Wednesday 4/16 4-5pm

Student: Layla Driscoll-Webster
Faculty Sponsor: Sarah Portway (Human Ecology)

Brave Blossom ☼ 

Brave Blossom is a sustainable business plan designed to support women who have battled breast cancer and undergone reconstruction surgery, along with those who faced similar medical challenges requiring reconstruction. The core of this initiative is to provide a compassionate approach to empowering these women by addressing their physical and emotional needs. Brave Blossom offers a range of products and services tailored to enhance post-surgery recovery, promote self-confidence, and foster a sense of community. The foundation of Brave Blossom was built upon firsthand insight from a breast cancer survivor, whose invaluable feedback has shaped the business model and product offerings. Through detailed interviews and personal stories, I gathered critical information about the challenges most women face navigating life after reconstruction surgery. Brave Blossom aims to

create a safe, empowering space for women to connect, share experiences, and access the resources they need to heal – both physically and emotionally. By combining empathy, sustainability, and a deep understanding of the unique needs of breast cancer survivors, the business plan strives to impact the lives of women throughout the United States. Giving them the tools to flourish after their battles with breast cancer and other medical conditions.
Presenting: Wednesday 4/16 9am-12:30pm

Student: Dylan Elman
Faculty Sponsors: Amy Crouse-Powers (Student Learning Center), Diana Moseman (Faculty Center for Teaching, Learning, & Scholarship)

Updating for the Modern Age: Addressing Mobile and Accessibility Concerns for the Tracktion Website
The Student Learning Center (SLC) at SUNY Oneonta uses a website called Tracktion (tracktion.oneonta.edu) to allow students and faculty to access services provided by the SLC such as tutoring and academic advisement. For students, this website is the primary means of requesting services and updating these requests. For tutors, the site is the means of applying to be a tutor, organizing current appointments, and documenting sessions. Currently, the website is unable to run on mobile devices, a major access point to the internet in modern times. Furthermore, the website's compliance with the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines (WCAG) must be evaluated and updated to allow the site to be fully utilized by users with assistive devices and technologies. This presentation aims to explore a specific page on Tracktion, the Request for Tutoring Services, to showcase various considerations that must be accounted for in order to make Tracktion accessible for everyone.
Presenting: Wednesday 4/16 1-5pm

Student: Rachel Faden (G)
Faculty Sponsor: Jeffrey Heilveil (Biology)

Examining the Genetic Diversity of *Cordulegaster maculata* in Otsego County, NY ★ ☼
The twin-spotted spiketail (*Cordulegaster maculata*), is one of the larger nymph dragonflies in Otsego County. As land use and weather patterns change, organisms that live in Otsego County can be affected. Due to limited knowledge of their genetic structure, we are unsure of how these environmental stressors impact the organisms. The goal of this study is to determine the genetic diversity at two mitochondrial genes for *C. maculata* in six tributaries of the upper Susquehanna River, in Otsego County. The knowledge gained can serve as a baseline for future research and conservation.
Presenting: Wednesday 4/16 9am-1pm

Students: Ciara Fajardo, Ava Locurcio
Faculty Sponsor: Yun-Jung Choi (Human Ecology)

The Digital Revolution in Fashion
Technology is now a crucial component of the fashion industry, transforming how companies create, market, and design their goods. The industry has witnessed a sharp increase in the use of digital innovations as they continue to influence consumer experiences in a variety of technology. Technology within the fashion industry is extremely important due to its innovation in design, sustainability, trend forecasting, creativity, and personalization. This research explores the current status of technology in fashion, providing a background on key technological developments and their significance in the industry. The primary purpose of this study is to examine how technology is utilized in fashion and to understand its impact on design, production, marketing, and customer interaction, as well as its importance within the fashion industry. This research was collected from the content analysis of many different sources. The content from websites, images, and informational and

educational videos were strong resources in supporting our data and findings. The analysis of these sources provided key insight into our topics explored throughout this research study. Various sources indicate that an increasing number of leading fashion companies are adapting and transforming their business models through the integration of advanced technologies, including Artificial Intelligence. The collected data reveal and emphasize the ways in which fashion businesses integrate technologies to optimize business performance and enhance customer experiences. Nike enhances consumer engagement through Artificial Intelligence (AI) using interactive systems and personalized shopping experiences at their House of Innovations (Frame, 2023). Polo Ralph Lauren integrates smart textiles and wearable technology to track biometrics and enhance comfort and agility (Ralph Lauren Corp., 2014). Levi's® Water<Less™ products adopt sustainable manufacturing technologies, such as laser finishing and waterless dyeing, to reduce environmental impact (Water, 2012). American Eagle incorporated augmented reality to promote their products via Snapchat. Snapchat created a filtered lens by using users' back camera to showcase American Eagle's online resale shop (Deyo, 2023). H&M also began launching blockchain technology in their clothing rental service. Each garment has a unique scannable IoT label in which blockchain is able to securely track the garments' information. Similarly, Dolce & Gabbana used blockchain technology as well as the metaverse in creating their metaverse fashion week in 2022. This included a collection of metaverse wearable looks modeled by customized avatars. Dolce & Gabbana utilized blockchain technology as well as the metaverse for this launch. The findings of this research highlight the evolving dynamics and activities within the fashion industry as technology transforms traditional practices. This study presents a comprehensive analysis of the intersection between technology and fashion, delineating both the opportunities and benefits associated with digital advancements in the industry. While technology offers numerous opportunities for innovation, sustainability, and efficiency, further investigation is required to explore challenges such as data privacy concerns, high implementation costs, energy consumption, and the necessity for continuous adaptation. Addressing these challenges will be crucial for ensuring the responsible and effective integration of technology within the fashion industry.
Presenting: Wednesday 4/16 1-5pm

Student: Nicholas Festa
Faculty Sponsor: Wendy Lascell (Geography & Environmental Sustainability)

Pollinator Garden Design ☼

According to the USDA (2023), there has been a significant loss in pollinator populations worldwide. These species provide ecosystem services on which our agricultural and ecological systems depend. This project is part of a multi-year initiative to incentivize local homeowners to replace part of their traditional lawns with an Otsego County native pollinator garden plot. Pollinator garden plots provide space and food for keystone species like monarch butterflies and other pollinators. The research objectives driving this project are to identify native host plants for pollinators and their larvae, to identify native plant species able to ward off herbivores (i.e. whitetail deer), and to design plots that utilize both types of plants effectively. The research was conducted by reviewing state-funded archives, academic articles, and books that focus on the native ecology of New York State, with a focus on Otsego County. Notable analysis methods include cross-referencing the New York Flora Atlas and the Cornell Cooperative Extension concerning deer-resistant plants. Significant results include finding various plants that contain traits that deter deer, including Christmas fern, common flat-topped goldenrod, hay-scented fern, and others. A collection of pollinator-hosting plants containing milkweed and goldenrod species was identified. Identifying native pollinator host plants in combination with plants that deter herbivores can allow for a gradual increase in habitat area for vulnerable species like monarch butterflies. Expanding native grassland habitats will create more opportunities for pollinators to reproduce and feed, promoting their populations' resilience and the ecosystem services they provide.
Presenting: Wednesday 4/16 1-5pm

Student: Morgan Fleming (G)
Faculty Sponsor: Florian Reyda (Biology)

A Deeper Look at Hooks: Inter-relationships Among *Neoechinorhynchid acanthocephalans*
★ ☼

Acanthocephalans are integral parts of ecosystems and can damage host populations. There is, however, an existing knowledge gap about most species of acanthocephalans and many of them have yet to be analyzed using modern technology, including DNA sequencing. The key objective of this project is to increase our understanding of features of Family Neoechinorhynchidae, a diverse group of ~150 acanthocephalans of fish and turtles that consists of 18 genera worldwide. The approach is to compare species of the 9 genera that occur in the United States using morphological data, with a focus on hook morphology, and DNA sequence data. The first phase of this project and the focus of this presentation is the survey work to obtain representatives of species of each of these 9 genera from at or near their type localities. As a result of various surveys, we now have study sets of specimens of 8 of the 9 genera; with collection of the 9th genus yielding unsuccessful. The samples acquired include *Tanaorhamphus longirostris*(Van Cleave, 1913) Van Cleave 1919 and *Gracilisentis gracilisentis* (Van Cleave, 1913) Van Cleave 1919 from Gizzard shad (*Dorosoma cepedianum*) from the Illinois River near Havana, Illinois; *Octospiniferoides chandleri*Bullock, 1957 from Eastern mosquitofish (*Gambusia holbrooki*) from the Florida Everglades; *Floridosentis elongatus* Ward, 1953 from White mullet (*Mugil curema*) from coastal Florida; *Atactorhynchus verecundus*Chandler, 1935 from Bolivar Peninsula, Texas; *Paulisentis fractus* Van Cleave & Bangham, 1949 from Wayne County, Ohio; *Octospinifer macilentus* Van Cleave, 1919 from localities in New York; various species of *Neoechinorhynchus* Stiles and Hassall, 1905 from various localities. This talk focuses on the specific results of the second year of field sampling and observations of these genera on the preliminary tree. These observations include *Paratenuisentis ambiguus*, a species from Tenuisentidae, nesting within a clade of neoechinorhynchids and a clade that has extensive hook roots in common.

Presenting: Wednesday 4/16 1-5pm

Student: Emma Flores
Faculty Sponsor: Kiyoko Yokota (Biology)

Effects of pH Levels on the Development of Bush Bean Plants ☼

Pollutants in the environment, such as chemicals, can alter the pH of water and soil, resulting in changes in growth and germination times. This has a direct impact on crop production. The purpose of this study was to investigate the effects of different pH levels of water on the development of bush bean plants. I hypothesized that the pH of water affects the germination and growth rates of bush bean seeds. I predicted the plants watered with an acidic aqueous solution would have minimal growth and shorter stems. Fifteen seeds were placed into each beaker and soaked in the aqueous solutions, the two treatment groups were soaked in a NaOH or HCl solution to simulate different pH levels, pH 4 and pH 9, and the control group was soaked in distilled water, pH 7. All groups were placed in an incubator at 26 degrees Celsius for the entire experiment. Once the seeds germinated, they were planted in soil and watered twice weekly with 15 mL of the same solution. The stem length of each plant was observed and recorded to determine the effects of pH level in the water. It was found that pH 4 had the greatest average stem length at 19.7 cm, pH 7 had an average stem length of 16.5 cm, and pH 9 had an average stem length of 18.6 cm.

Presenting: Wednesday 4/16 3-5pm

Students: Amoun Ghorayeb, Michel Ghorayeb
Faculty Sponsor: Fred Zalatan (Biology)

T-why-1 Gag Protein Interacts with Endomembrane Vesicles

This study is determining whether a transposon complex interacts with components of the endomembrane system in yeast. Transposons are mobile DNA components that copy and insert

themselves at different locations within a genome, leading to genetic diversity and genome plasticity. Ty1 is the yeast transposon being studied; the Gag protein is encoded by the transposon and is essential for transposon assembly replication. This methodology will use fluorescent microscopy to conduct co-localization analysis to observe whether the Gag protein is associating with vesicles formed by the endomembrane system.
Presenting: Wednesday 4/16 1-5pm

Students: Michel Ghorayeb, Grace DeClerk, Rachael Rivenburg, Amoun Ghorayeb, Liam Brady, Christie Ghorayeb
Faculty Sponsors: Alex Sotola, Fred Zalatan (Biology)

Bridging Gaps: A Genome-Wide Association Study of SUNY Oneonta Student Health Metrics ★

This research explores disparities in medical standards and how various factors affect healthcare outcomes. The study investigates the correlations between genetic variation and key health metrics, including vital signs, diagnoses, and treatment efficacy. The goal is to identify factors that contribute to inconsistencies in healthcare delivery and provide insights into improving equity within medical practices. The methodology includes a review of existing data sources and an analysis of patient records, focusing on identifying patterns that suggest discrepancies in care based on non-medical factors. The research utilizes statistical models to assess the relationship between these factors and their impact on patient outcomes. The findings aim to highlight areas where current medical standards may need adjustment to ensure equitable healthcare across all populations. Preliminary conclusions suggest that certain factors beyond traditional medical criteria can influence healthcare delivery and patient outcomes. These findings are important for understanding the broader implications of medical practices and the need for reform to address these gaps. The ongoing phase of the study is refining these models and exploring potential solutions to reduce disparities. The significance of this research lies in its potential to inform policy changes, enhance healthcare training, and improve overall healthcare delivery by bridging the existing gaps in medical standards.
Presenting: Wednesday 4/16 1-5pm

Student: Maya Golos
Faculty Sponsor: Jian Cui (Art)

Mixed Media Exploration ★

Last semester, I completed an independent study in mixed media arts under the supervision of Professor Jian Cui. I put an emphasis on collage, papier mâché, acrylic painting on canvas, and marker illustrations. I worked in various sizes, the largest project being two combined canvases measuring 3 feet by 6 feet in total. The theme for this study was to show how I have grown and changed throughout my education at SUNY Oneonta, and my inspiration for these works was different mental states that I have experienced within the last four years as a college student. My first work, *Stress Diptych* (acrylic, collage, and papier mâché on canvas), depicts how stress affected my well-being as a student. The background of this piece included my biggest stressors as various words and phrases. There is also the physical aspect to it, showing in an exaggerated way how school can affect my mentality (mind), emotions (heart), and body (leg bone). I also used papier mâché as a way to convey three-dimensional textures. Though this piece was based on my own experiences, I was inspired by the work of the contemporary American painter Jean Michel Basquiat. For my second piece and the biggest painting I have made yet, *Moving Mountains* (acrylic, papier mâché on canvas; alcohol marker, colored pencil, and ink on Bristol cut-outs) is a visual journey of my life (viewed from left to right) going from a young adult to a college student. The first canvas is my life before college, featuring a beach based the ones we have near my home on Long Island. Then, as a transition to higher education and to the second canvas, I am "moving mountains" as a reference to my determination and hard work throughout my life, especially in college. In the clouds above, it shows

interests, hobbies, activities and objects that are significant to my college life, including my computer (which is a core part of my life as a student), headphones, music, Judaism, and art. After that, I am pictured laying down, exhausted from all my effort featuring some confused onlookers. For this diptych, I mainly referenced history paintings from the 17th century. Through these projects, I hope to be able to relate to the people who view my works, either in-person or online, so they can see themselves in my art. I want to inspire others to pursue the arts and exercise their creativity. More often than not, I hear people claiming that they are not artistic or commonly saying "I can only draw stick figures", which deeply saddens me. I hope that my art encourages others to pursue at least some degree of creative activity since it is a great outlet for emotions we keep hidden from others, even if you are not perfect at it.
Presenting: Wednesday, 4/16 1-5pm

Student: Ethan Hadley
Faculty Sponsors: Ronald Bishop, Angela Migues (Chemistry & Biochemistry)

Design and Synthesis of a Quinocyanine for Medicinal Chemistry Applications

The aims of this work were twofold: *in silico* investigation of solvatochromism (where a solvent changes the emission or absorption spectrum), and the chemical synthesis, purification, and analysis of a novel merocyanine incorporating quinaldine. The goals of these and related studies are to design and produce merocyanines that act as antagonists of Transient Receptor Potential Vanilloid Type 1 (TRPV1) receptors. These ion channels, also known as vanilloid 1 receptors, are primarily responsible for triggering nociceptive pain. Meta-analysis of compounds known to activate or deactivate these receptors (to trigger or suppress pain), suggested to us that the agonist capsaicin (from hot peppers) and some receptor antagonists had molecular shapes that could be mimicked by a class of molecules called merocyanines. Merocyanines have peculiar abilities to electronically "tune" surface characteristics to their environments (i.e., surrounding solvents), behavior that can be observed visually as solvatochromism. Therefore, they might offer unique abilities to shape-shift upon migration from aqueous solution to protein interiors. We report the first in silico solvatochromism studies, as well as organic synthesis and analysis by FTIR, NMR and physical solvatochromism, of a merocyanine that incorporates a quinoline derivative (quinaldine). We call this new class of molecules quinocyanines.
Presenting: Wednesday 4/16 11am-1pm

Student: Connor Hanington
Faculty Sponsor: Scott Maguffin (Earth & Atmospheric Sciences)

Micronutrient and Contaminant Responses to Alternate Wetting and Drying (AWD) in Rice ★ ☼

Rice (*Oryza sativa*) is a staple crop critical for global nutrition, but traditional continuous flooding methods can elevate toxic element accumulation, particularly arsenic, while affecting micronutrient availability. Previous research has shown that Alternate Wetting and Drying (AWD) irrigation reduces arsenic uptake, water usage, and methane emissions. However, the impact of AWD-induced redox oscillations on micronutrient dynamics across different soil types and cultivars remains poorly characterized. This study investigates these effects using controlled growth chamber experiments to compare Arkansas and New York soils and previously studied rice cultivars. By bridging field research and laboratory experiments, this approach mitigates environmental variability that complicates field studies. Continuous monitoring of environmental parameters, along with comprehensive analysis of porewater chemistry and rice grain composition, will clarify how AWD influences micronutrient availability and toxic element accumulation. The findings of this study aim to inform the development of soil-specific irrigation strategies that optimize nutrient bioavailability while mitigating contaminant uptake in rice cultivation systems.
Presenting: Wednesday 4/16 1-5pm

Student: Isabella Harnett
Faculty Sponsor: Keith Brunstad (Earth & Atmospheric Sciences)

Understanding the Physical and Chemical Constraints on Long Lava Flows in Arc Volcanism: A Case Study of the Tieton Andesite and Basaltic Andesite Flows

Arc volcanism is often associated with explosive eruptions but can include effusive eruptions that produce long lava flows. This study uses field observations and numerical modeling to understand the physical constraints controlling the length and morphological features of these lava flows. The Tieton andesite and basaltic andesite lava flows, originating from the Bear Creek Mountain eruptive center in the Southern Washington Cascades, are examples of long lava flows found worldwide. These flows range from 52 to 74 km long, contain 53-63% SiO2 wt%, and have bimodal crystal contents of ~ 30-50% in a polyphase suspension of crystals and gas bubbles within a liquid silicate melt. The volume of the Tieton andesite is between 2.5 and 6.6 km^3, with effusion rates of 11 to 18 m^3/s. Field evidence, including cooling structures, suggests flow inflation and water interaction. To understand the physical and chemical constraints on lava flow length, we analyzed field data from two Tieton andesite and two basaltic andesite flows. We calculated the liquid silicate melt composition, glass transition temperature (Tg), viscosity (η), and melt fragility (m) using the methods of Giordano et al. (2008). Field observations indicate the lava flows were confined to deep valleys and exhibited basal and marginal breccias. These breccias showed clast point welding, which graded upwards into densely welded breccia and finally transitioned into columnar jointing. Numerical modeling with FLOWGLOW© provided temperature estimates of 1120°C, a viscosity of 6551 Pa·s, and crystal contents of 35%, consistent with reported melt compositions and viscosities calculated using Giordano et al. (2008). The composition of the magma residue after removing the crystal fraction ranges from 57-71% SiO_2. The glass transition temperature (Tg) varies from 945-630 K depending on H_2O content, viscosity ranges between 5.87 and 1.27 Log_{10} η, and fragility (m) ranges between 17 and 32. Calculated glass compositions are comparable to those measured in the lab. Model temperatures align with field observations of morphological features. Higher fragility (m) indicates low volatile contents of < 3%, leading to more effusive eruptions. Thermal insulation helps maintain heat, allowing a valley-confined, thermally insulated flow to extend further.

Presenting: Wednesday 4/16 1-3pm

Students: Megan Heath, Elizabeth Van Dick, Sydney Thorp, Nina Little
Faculty Sponsor: Robert Lockamyeir (Psychology)

Forced Reaction Time in Eyewitness Identification Lineups: How is Accuracy Impacted?

Eyewitness identifications can have a strong impact on potential convictions, although these identifications are not always accurate. To protect against convictions of individuals that have been incorrectly identified, it is necessary to understand the accuracy of eyewitnesses. Research suggests that response time has a negative relationship with accuracy, as well as a positive relationship between confidence and accuracy (Seale-Carlisle et al., 2019; Quigley-McBride & Wells, 2023). Identifications made with high confidence are more likely to be accurate, but when high confidence is combined with slow decision time, accuracy drops (Grabman et al., 2019; Palmer et al. 2013). Although evidence indicates that faster eyewitness decisions are more likely to be accurate, research has not yet been conducted on forced response time. Our study aims to investigate how limited response time will impact accuracy and confidence levels. Given these findings, we would like to investigate whether participants working with forced-response time will have better accuracy in making identifications. This study aimed to investigate how forced response time affects accuracy and confidence. The results of this study could provide crucial real-life implications that would help law enforcement, and the criminal justice system avoid mistaken identifications that cause harm to the lives of innocent individuals. The limited response time in the 5 seconds or less condition did not impact accuracy or confidence, in comparison to those in the unlimited time condition who responded in less than 5 seconds by choice. Those who were limited to 20 seconds but answered in less than 5

seconds demonstrated the greatest accuracy and confidence thus far. However, more data collection is necessary to establish this relationship. We believe that this effect may be due to the limited stress experienced in the 20 seconds condition, because of the less restrictive time pressure. Participants are prompted to utilize quick recognition memory but are not forced to respond in under 5 seconds.
Presenting: Wednesday 4/16 1-5pm

Students: Yasiris Hernandez (G), Laura Sandoval
Faculty Sponsor: Maria Montoya (World Languages & Literatures)

Quality Education and Economic Growth for Afro-Colombians in Cali and Cartagena ★ ☼
This research seeks to observe Afro-Colombian communities to determine their opportunities for decent work and access to education. The places chosen for this investigation are Santiago de Cali, in the Pacific region, and Cartagena, in the Caribbean region. Cartagena and Cali are among the two cities with the most significant proportion of Afro-Colombians. Cali has a population of 2.5 million, of which approximately half are of African descent. (The Economist, 2019). On the other hand, Cartagena has a population of a little over a million (Indias, 2023, p. 1). Therefore, it will support the observation and analysis of this population's means of survival, quality of life, and learning journeys. Student researchers will observe firsthand the sources of income of the Afro-Colombian population in these cities. Moreover, they will investigate existing entrepreneurship initiatives managed by Afro-Colombians to benefit their communities. The investigation seeks to overview descriptively formal and informal jobs where the Afro-Colombian community is employed. Through the encounters with working Afro-Colombians in various sectors of tourism in Cartagena and a cultural festivity gathering in Cali, "El Petronio," the student-researchers will inquire about life stories regarding their journeys and struggles to access formal education and their opportunities for personal and economic growth. Researchers will infer progress, or lack thereof, after examining existing government programs that may support business initiatives targeting Afro-Colombians from Cali and Cartagena.
Presenting: Wednesday, 4/16 1-5pm

Student: Devyn Hom
Faculty Sponsor: Thomas Beal (History)

Stonewall: The Catalyst for the Gay Liberation Movement ★
It was a sight to behold: the 1968 Volkswagen Beetle with the roof caved in, the parking meter ripped from its usual spot in the sidewalk, the water gushing into the air from a nearby fire hydrant, and, of course, the police officers, dressed head to toe in riot gear, pushing against the growing crowd outside the Stonewall Inn on June 28, 1969. The gay bar, once described as "a dump painted black" with "nothing to talk about except the magic of the jukebox," set the stage for a pivotal historical event. Often credited with sparking the Gay Liberation Movement, it holds immense historical significance, marking a turning point in the fight for LGBTQ+ rights. The history of the Stonewall Uprising is connected to topics like gay rights, police brutality, and intersectionality. Although the fight for gay rights became more visible over the past couple of decades, the existence of LGBTQ+ people has always been there, often erased from history. This research project uncovers the reality behind the Stonewall Uprising, the hidden history of gay culture, and the future of gay liberation as we move through the twenty-first century. Since the Stonewall Uprising, many things have changed in legislation regarding the LGBTQ+ community and societal views. A widespread movement started the fight for gay rights, leading to much of the progress we see today, such as the birth of the annual New York City Pride March and the legalization of gay marriage. This project includes information drawn from archives, historical monuments, and personal interviews conducted with Stonewall survivors and people connected to the gay liberation movement of today. The Student Research and Creative Activity Grant funded this project. With their support, I visited the Stonewall Inn. Through interviews, I learned about various subjects relating to the LGBTQ+ community. Hugh Ryan, a historian and author, gave me insight into the relationship between the

criminal justice system and the LGBTQ+ community in the1900s. Jason Cianciotto, the Vice President of the Gay Men's Health Crisis, the first health organization in the world dedicated to the support of people who have HIV/AIDS, taught me about the history of the AIDS epidemic and its continuing impact on the LGBTQ+ community. Mark Segal and Jay Toole, survivors of the Stonewall Uprisings, gave me their stories relating to the event and the gay liberation movement of the 1970s. Mark Segal, who continues to advocate for the LGBTQ+ community, was especially proud of his role in increasing the community's visibility in the media. Jay Toole spoke about her life growing up as a lesbian in the 1960s, while also experiencing homelessness, which is still relevant today as many LGBTQ+ identifying youth are vulnerable to unstable housing. Together, they painted an accurate picture of life for LGBTQ+ individuals and their struggles today. Through awareness and understanding, we can actively promote change in the system to improve the quality of life for this minority.

Presenting: Wednesday, 4/16 1-5pm

Student: Kento Igarashi
Faculty Sponsor: Wesley Bernard (Art)

Faces ★

"Faces" is a photography exhibition that captures the depth and complexity of human expression. Through a series of portraits, this project explores how subtle changes in facial features can convey a vast spectrum of emotions. Each image is an intimate study of the subject's presence, offering a glimpse into their unspoken narratives. This collection reflects my perspective on the local people— an attempt to see beyond the surface of Catskill area and connect with the emotions people carry. In an era of constant visual noise, I aim to strip away distractions and highlight the raw, unfiltered essence of local community. Every face tells a unique story, shaped by personal experiences, culture, and moments in time. By focusing on expression, I invite viewers to engage in a silent dialogue with the subjects, to recognize emotions that might mirror their own or challenge their perceptions of others. As a photographer, my work is driven by curiosity and observation. Faces is not just about capturing individuals; it is about understanding humanity as a whole— how we express ourselves, how we are seen, and how we see others. This exhibition encouraged viewers to pause, reflect, and engage with the emotions that define us all.

Presenting: Wednesday 4/16 9am-1pm

Students: Joshua Ippolito, Tyler Mann, Ethan Biles
Faculty Sponsor: Joshua Nollenberg (Physics & Astronomy)

Using Type Ia Supernova as Standard Candles to Measure the Universe

We are searching for high-redshift Type Ia Supernovae using the James Webb Space Telescope (JWST) in order to place constraints on our cosmological models. Type Ia Supernovae are considered "standard candles," since the disruption of a white dwarf star is thought to occur explosively at a sharply-defined mass limit called the Chandrasekhar Limit. We discuss the use of Type Ia Supernova as probes of cosmological models and describe the impact of our efforts if we are able to find Type Ia supernovae at high-redshift.

Presenting: Wednesday 4/16 9am-1pm

Student: Alexander Javitz (G)
Faculty Sponsor: Daniel Stich (Biology)

Comparing Past and Present Data to Construct a Management Plan for Loon Lake, Wayland, NY ☼

Loon Lake is a 166-acre kettle lake in the town of Wayland, Steuben County New York. In 2018 water samples were conducted from June through September following the Citizens Statewide Lake

Assessment Program (CSLAP) a volunteer lake monitoring program run by the NYS Department of Environmental Conservation (NYSDEC) and the NYS Federation of Lake Associations, Inc. (NYSFOLA). Monitoring was conducted to help understand the state of Loon Lake, so that a management plan can be created that supports stakeholder goals. To achieve these goals and obtain quality data on the lake, a one-year sampling plan was conducted. This sampling occurred from October 2023 to October 2024. A limnological study was conducted on the lake at the deepest point to understand how the limiting factors change throughout the year. Measuring temperature, oxygen, pH, total phosphorus, ammonia, total nitrogen, nitrate/nitrite, specific conductance, calcium, alkalinity, hardness, salinity, and chloride. This will be done, in part by using a water quality multimeter to create a full monthly profile to show seasonal changes. Additionally gathering and compiling available historical and background information about the lake and its management, including human populations, conducting watershed analyses to quantify important characteristics of the landscape including geomorphology, geology, soil composition, and land use. At the conclusion of the sampling period data will be analyzed and compared with CSLAP data to create a management plan Loon Lake.
Presenting: Wednesday 4/16 1-5pm

Student: Amanda Katz
Faculty Sponsor: Nathan Asman (Music)

Studies in Wearable Technology ★

Dr. Nathan Asman of the Music Industry Department and Manny Katz of Fashion & Textiles/Media Studies have been working together on what they call, “Wearable Technology,” for three semesters now. Last year, Dr. Asman & Manny researched and developed wearable technology using Arduino-based hardware components, as well as different types of software. Manny learned basic programs, such as Ableton, looked at coding, soldering, prototyping, and application of technology to be worn as apparel, and finally, used practical application of aforementioned skills and techniques. This particular study - as shown, culminated in multiple garments utilizing different types of technology, to be displayed in the Student Fashion Show in the Spring, entitled, “Tamagotchi.” This semester, as Manny’s final semester at SUNY Oneonta, Dr. Asman and Manny are working together on one technologically sound ensemble. This independent study, entitled, “Entities of Invention,” will culminate in multiple garments utilizing different types of technology and coding technology, as well as a fully-fledged and working modular synthesizer. The concept/idea for this project is DJ/synthesizer/instrument set up that the user can physically wear/travel with on the go. We wanted to create an ensemble that could double as a synth module and plug into a synthesizer. Dr. Asman & Manny’s “Wearable Technology” has many such significance across multiple disciplines and platforms. Wearable technology is a huge and highly unsaturated market within the fashion design world, and is definitely one that requires development, care, and understanding. Manny has decided that she is incredibly interested in this aspect of design and would like to move forward in my academic and professional career using the skills and knowledge she has learned while working with Dr. Asman on their "Wearable Technology." The reason that Dr. Asman and Manny’s work differs from that of many engineers and fashion designers that have come before them, is that their work primarily focuses on sound and audio under the guise of fashion, which is a topic and an interpretation that has never been done before in either discipline. For this particular project, the inspiration was Dr. Asman as himself and modular synthesis. He and his work inspired me to such a degree that I wanted to design something that could be helpful to him or somebody of the likes. The rave jacket also aligns with who I am as a person, designer, and creator: kitschy but at the same time, wearable and useful, with bits and pieces of modernism and media and technology. I am a dual major: fashion design and media studies. What I attempt to do in all of my work in both disciplines is seek a path in which they can converge in a way that is next to natural even though they are comprised of elements that are anything but. This project is the perfect example of that; even working on the

independent study at the moment just reminds me how passionate I am about wearable technology and in turn, how passionate Dr. Asman now is too. - Manny Katz
Presenting: Wednesday 4/16 9am-1pm

Students: Dillon Kelly, Anna Bernas, Savannah Bond
Faculty Sponsor: Jill Fielhaber (Biology)

Surveillance Testing for Tick-Borne Diseases at College Camp ☼

Due to climate change, the tick population, and therefore, the prevalence of pathogens that utilize ticks as vectors, is increasing. The goal of this experiment is to gain a better sense of the current frequency these pathogens appear in the tick population, specifically in the Oneonta area. In the fall of 2023, 31 ticks were collected from College Camp. The species of all 31 ticks collected, utilizing microscopy, was determined to be *Ixodes scapularis*, commonly known as the black-legged tick. DNA was extracted from the ticks, using a Qiagen DNA Extraction / Purification kit and procedure. Real-time PCR will be used to detect four common tickborne pathogens (*Borrelia burgdorferi, Borrelia miyamotoi, Anaplasma phagocytophilum, and Babesia microti)*. Weather permitting, an additional collection will be performed at College Camp, or other publicly accessible lands in the Oneonta area. These collections will be performed using standard "flagging" and "dragging" techniques to collect tick larvae, nymphs and adults for additional testing.
Presenting: Wednesday 4/16 1-5pm

Student: Ashley Komosinski
Faculty Sponsor: Geoffrey O'Shea (Psychology)

Memory Consolidation Enhances Serial Learning: An Investigation Using the Hebb Digits Task

Memory consolidation is the change that a memory undergoes as it becomes strengthened in memory. The field of psychology has studied memory consolidation for 125 years beginning with Müller and Pilzecker's (1900) classic study demonstrating that memory for a list of words was disrupted when a period of new learning followed. Jenkins and Dallenbach (1924) later demonstrated greater recall for a list of nonsense syllables after a period of sleep rather than a period of activity. The primary finding was that learning is facilitated when the learning session is followed by sleep compared to a period of mental activity. In the present study, we investigated whether consolidation could enhance recall in a well-known serial learning task, the Hebb Digits task. During the Hebb Digits task, participants are presented with sequences of digits to recall. There are two types of sequences: a repeating digit sequence and a non-repeating digit sequence. Serial learning in this task is assessed by recall performance on the repeating digit sequences relative to the non-repeating digit sequences. We adapted the format of the Hebb Digits task to the consolidation paradigm by having two learning sessions separated by an intervening period of sleep. Using this format, we tested the hypothesis that serial learning of the digit sequences in the second session would be enhanced due to the intervening period of sleep. Results found that participants' recall for both the repeating and non-repeating sequences was greater for session two. Additionally, participants' rate of digit entry was faster for session two. The results are discussed in terms of the role of consolidation in associative and motor learning.
Presenting: Wednesday 4/16 2-5pm

Students: Aidan Levitz, Robert Cellura
Faculty Sponsor: Wilson Lin (Business)

Giving Money vs. Giving Time: The Effects of Charity Brand Roles on Donation Intention ☼

Marketers often describe their products using human-like personalities and present these anthropomorphized products in specific roles within marketing campaigns. A partner brand is defined as a co-producer of benefits, whereas a servant brand is defined as an outsourced provider of benefits. Nonprofit organizations can also leverage this brand role positioning strategy to their advantage. A

real example of a partner role is a nonprofit called Together for Children, which emphasizes the nonprofit's role in "working with" donors. An example of a servant role is the Connecticut Library Association's We work. For you. shirt, highlighting the nonprofit's role in "working for" donors. The next research question in this project is whether different nonprofit organizations and their positioned roles can motivate donors to contribute money versus time (i.e., volunteering). We conducted an online experiment to show that the partner role positioning is more effective for time-asks due to its association with warmth perception. The servant role positioning is equally effective for time-asks and money-asks. By demonstrating that brand role positioning affects the effectiveness of charitable advertisements, we illustrate how nonprofits can tailor their messaging based on their need for monetary or volunteer support.
Presenting: Wednesday 4/16 1-3pm

Student: Emely Lopez
Faculty Sponsors: Rachel Kornhauser (Office of Sustainability), Tao Wu (Math, Computer Science, Statistics)

Power BI Dashboard for Tracking Sustainability at SUNY Oneonta ☼
This project utilizes Power BI to develop an interactive dashboard for visualizing sustainability metrics at SUNY Oneonta's Office of Sustainability. The dashboard integrates key data points, including waste and recycling rates, food waste, greenhouse gas emissions, water and energy usage, electric vehicle charging, bus ridership, sustainability courses, and LEED-certified buildings. It provides actionable insights to track STARS progress, Green Room Certifications, and sustainability events. By centralizing data, this tool enhances decision-making and promotes campus sustainability initiatives.
Presenting: Wednesday 4/16 1-5pm

Students: Elber Lopez-Hernandez, Christopher Dorce, Colin Santon, Christopher Solano
Faculty Sponsor: Fred Zalatan (Biology)

Quantitating Differences in Ty1 Gag Levels
Ty1 is a transposable DNA element in *Saccharomyces cerevisiae*. Previous studies from our laboratory have shown that two sets of clathrin mutant strains have increased levels of the Ty1 Gag protein. These strains have either a lower expression or a complete absence of the clathrin protein complex, which functions in endocytosis. Our study is quantitating the potential increase in Ty1 Gag levels in these clathrin mutant strains using iBright Analysis Software.
Presentation Session: Wednesday 4/16 3pm

Student: Olivia MacGiffert
Faculty Sponsors: Wesley Bernard (Art), Ed Beck (Faculty Center for Teaching, Learning & Scholarship)

Graphic and Web Design Student Internship
Each year, SUNY Oneonta's Faculty Center hires a design intern. Mentored by faculty members in their department and Faculty Center staff, they are assigned a variety of web and creative projects for internal and external audiences. This year's Olivia will speak about her experience, the connection to her coursework, and professional skills. As a graphic design major, she has taken courses such as Graphic Design and Typography that have helped her gain skills and knowledge that have been applied to projects that she is working on. There are 3 main projects that combine graphic design skills and serving internal and external stakeholders. Olivia is currently working on supporting an OER textbook creation project. The project included creating a textbook cover design for the front, back and spine. Information was provided in the textbook and some ideas from the professors. Using their input, she was able to use formatting and type hierarchy skills from her typography class to create a few design ideas for the textbook. Meetings were had with the professor to present the

designs and was able to take feedback and make a decision on the final design. Olivia is also working on consulting with the State Times the student newspaper on a redesign project for the newspaper's website. The project included having meetings with the student newspaper team, coming up with a proposal, and prioritizing efforts to where they would have the greatest impact. Multiple mockups were created and presented to the Newspaper Editorial Team. Feedback was gathered and a design was finalized. In addition to the textbook and the campus newspaper projects, the intern was also given the opportunity to work with an external, not-for-profit adoption agency on a website design project. The agency is in the midst of re-branding, which tasked redesigning their website to coincide with the re-brand. Meetings have been held with the agency to talk about their goals for the redesign and how to move forward. Taking initial ideas, a homepage was designed to show them what it could look like. She wanted to finalize the design aspects of the website before adding all of their new language. Meetings were held with the agency a couple more times to hear their feedback and to apply it to create a design that they are satisfied with. This internship experience has provided the opportunity to take valuable skills and knowledge that have been introduced in the classroom and apply them to professional experiences within the college community.
Presenting: Wednesday 4/16 1-5pm

Student: Allison Malamud
Faculty Sponsors: Jill Fielhaber, Kiyoko Yokota (Biology)

The Impact of pH on *Saccharomyces cerevisiae* Growth: Exploring Optimal and Extreme Conditions ☼

Saccharomyces cerevisiae (Baker's Yeast) is a widely studied model organism with various applications. This study investigates the effect of pH on yeast growth, hypothesizing that extreme pH levels (acidic or basic) would inhibit growth compared to the optimal pH of 5 I hypothesized that extreme pH levels would inhibit yeast growth, expecting lower cell counts at pH 3 and pH 9 compared to pH 5, where yeast typically thrives. To test this, I prepared yeast extract peptone dextrose (YPD) medium at pH 3, 5, and 9, sterilized the solutions, and inoculated them with an overnight yeast culture. The samples were incubated for three days in a shaker incubator. After incubation, I performed a direct cell count using an automated cell counter. Since I did not use trypan blue, the recorded values were doubled for accuracy. The results confirmed my hypothesis: yeast growth was significantly lower at pH 3 and pH 9 than at pH 5, demonstrating that extreme pH conditions negatively impact *Saccharomyces cerevisiae* growth.
Presenting: Wednesday 4/16 1-5pm

Students: Tyler Mann, Joshua Ippolito, Ethan Biles
Faculty Sponsor: Joshua Nollenberg (Physics & Astronomy)

Searching for Distant Supernovae to Measure the Universe Using the James Webb Space Telescope

SUNY Oneonta is a participant in a large collaboration to place constraints on our understanding of cosmology as part of the James Webb Space Telescope (JWST) Cycle 3 General Observers Program. By comparing deep, serendipitous observations from the James Webb Space Telescope with past observations of the same parts of the sky by other astronomical surveys, we are working to build a sample of the highest-redshift Type Ia Supernovae in existence. If any candidate detections of supernovae are found, our program will point JWST toward our candidate in a series of observations to take spectra and images to measure the distances to and the evolution of these explosions. In this presentation, we describe the efforts that we have made to build a data pipeline to process the large amounts of data in order to perform this search.
Presenting: Wednesday 4/16 9am-1pm

Student: Lily Mcardle
Faculty Sponsor: Matthew Hendley (History)

Cities and Architecture in China ☼

For two weeks in summer 2024, two teachers: Professor Matthew Hendley and Professor Ho Hon Leung, six students of varying majors, and myself went to China for a dual history and sociology class. We went to Hong Kong, Qingyuan, and Guangzhou and explored a variety of sites and learned several things about Chinese history and culture. I took only the historical part of the course with Professor Hendley and a requirement for that was to keep a detailed travel journal describing each day. I went into detail about anything I noticed about Chinese culture and society, and all I've learned about the country's history. I also wrote a lot about the current culture of China. The place I learned the most about this was Qingyuan, where we stayed on an actual college campus. As documented in my journal, interacting with Chinese students provided me with so much knowledge about the culture of China and gave me experiences that I will treasure forever. I hope to present all this information at the SCRA by show casing my journal (both the physical one I kept while in China, and the digital copy I submitted with pictures), a power point presentation, and possibly (if I have time) a poster, as well as show some of the souvenirs I got both from the students and on my own while in China.
Presenting: Wednesday, 4/16 1-5pm

Students: Sabrinna Mena, Katie Daniszewski, Brendan Heaney,
Faculty Sponsors: Katherine Griffes (Sport & Exercise Sciences), Kelly Martin, Emily Riddle (Human Ecology)

The Body Project at SUNY Oneonta ★

A Spring 2024 needs assessment at SUNY Oneonta revealed a high prevalence of eating disorders (ED) and disordered eating (DE) symptoms and body dissatisfaction. Of the general population, 60% scored 15 or greater on the Eating Disorder Examination-Questionnaire Short (EDE-QS), indicating positive ED risk, while 42% were at moderate to high risk for compulsive exercise based on the Compulsive Exercise Test (CET). These findings highlighted the need for targeted interventions such as The National Eating Disorder's The Body Project (TBP), a peer-led, dissonance-based workshop that challenges societal appearance. This study evaluated TBP's effectiveness in reducing ED and DE symptoms among SUNY Oneonta students (pilot data, n=7). Pre- and post-session surveys assessed changes in ED and DE using validated tools, including the EDE-QS and CET. The Wilcoxonsigned rank test was used for statistical analysis. The results showed a significant decrease in post-intervention scores ($Z = -2.197$, $p = 0.028$ for both tools). The EDE-QS pre-test mean score was 14.57, near the positive risk threshold (≥15), while the post-test mean was 7.42, reflecting a 7.15-point reduction. For the CET, higher scores indicate a greater risk for compulsive exercise behaviors; the pre-test mean was 14.26, decreasing to 11.83 post-test, a reduction of 2.46. In conclusion, pilot data revealed TBP Workshop One yielded positive results by demonstrating a decrease in both EDE-QS and CET scores among participants, suggesting TBP may reduce ED and DE symptoms. Additional findings from this study may provide critical evidence that determines TBP's effectiveness and long-term feasibility at SUNY Oneonta.
Presenting: Wednesday 4/16 9am-1pm

Student: Rowan Mentley-Peters
Faculty Sponsors: Alex Sotola, Daniel Stich (Biology)

Genetic Variation of semelparous and iteroparous East Coast American Shad Populations ★ ☼

The American shad (*Alosa sapidissima)* is an anadromous fish species native to the East Coast of North America from Southern Canada to Florida. Shad live primarily in salt water as adults and return to their natal freshwater streams to spawn. Northern and Southern populations of American shad possess temporal and behavioral differences with respect to reproductive strategies; iteroparity, multiple reproduction events, decrease as latitude decreases. The presence of both semelparous and

iteroparous American shad populations have been reported in the Delaware River, approximately in the center of the species range. Unlike other rivers where shad populations reproduce, the Delaware River is unique in that it contains no mainstream dams. There are uncertainties surrounding the genetic basis of these divergent life histories. We continue to assess the genetic variation between shad populations with these differing life history strategies to determine if there is a genetic association pointing to genes directly involved in regulating their life-history. Fin clip samples were sourced from shad populations in the Delaware River and Florida populations in 2020. A genotyping-by-sequencing approach was taken to produce a reduced-representation multiplex genomic library. Genome-wide sequencing was used to determine the relationship between their genetic variation and life histories. We have determined that Northern and Southern populations differ genetically with distinct populations. Without an association between their genetic variation and their parity, pointing to genes involved with these divergent life histories, we cannot yet confirm life history presence in the Delaware river. While we are in the process of data analysis, we work toward a pronounced understanding of contributing geographic and genetic factors surrounding their life histories. Genetic diversity and structure findings can be used in conservation efforts to designate populations or areas that may require additional or specific management practices. With increasing anthropogenic effects on shad critical habitats and ocean temperatures, this information will be beneficial for supplementary studies and future research.
Presenting: Wednesday 4/16 9am-1pm

Student: Aidan Messier
Faculty Sponsor: Christopher Karmosky (Earth & Atmospheric Sciences)

Stormwater, an Analysis of Extreme Rainfall Frequency at SUNY Oneonta ☼

The South Campus Runoff and Pedestrian Project aims to improve the capabilities of an outdated stormwater drainage system at SUNY Oneonta. Significant rainfall events overstress the current system causing flooding when large quantities of water flow through a limited diameter outlet pipe. To address this, the campus is exploring the possibility of burying multiple storage tanks to divert rainfall and slowly release it back into the outlet pipe. The problem this research addresses is determining the frequency and magnitude of these problematic rainfall events. Three data sets of five-minute rainfall quantities were utilized, representing approximately 6.5 years of rainfall measurements. Data were collected by successive rooftop automated weather stations with a tipping bucket precipitation gauge. An event with rainfall rates of four inches per hour or greater is expected about every 5.9 years, while events with rates of 2.5 inches per hour or greater occur 2.4 times per year. The information learned from this project has been presented to the team of project engineers, who will optimize the volume according to the frequency of extreme rainfall events and the increased impermeable surfaces on campus.
Presenting: Wednesday, 4/16 9am-1pm

Student: Alexia Michitti
Faculty Sponsor: Sarah Portway (Human Ecology)

EM13RACE Adaptive Clothing 

EM13RACE (embrace) is a first of its kind adaptive clothing company. The purpose of this company is to design and develop clothing for people that are part of the limb different community. This first of its kind clothing had a patent published for the designs of solving the problem of a sleeve that is too long. These clothes allow people to purchase clothing that will already be made to fit their limb differences. The length of a sleeve can limit a people and grow to be another obstacle in their life if not taken care of properly. I, Alexia Michitti, was born without my right hand and struggled with a sleeve that was too long my entire life. People who are wheelchair bound and those who wear a prosthetic. These clothes make accessing prosthetic limbs easier and eliminate the needs to put a prosthetic on before getting dressed. Although there are other types of adaptive clothing out there, they are more focused on replacing zippers and buttons with velcro and magnets. The clothing from

EM13RACE is designed so no changes need to be made after they are purchased and ready to wear. I am looking forward to sharing my thought process for this and how I can make an impact on others.
Presenting: Wednesday 4/16 1-5pm

Student: Ivana Milanov
Faculty Sponsor: Alex Sotola (Biology)

Blossom and Beyond: Genetic Variation Between Native and Non-Native *Mimulus guttatus* Populations ☼

The seep monkeyflower *(Mimulus guttatus)* is a plant native to the Western United States, and their range is west of the Rocky Mountains stretching from South America, through California to Alaska. Interestingly, there is a non-native population found growing nearby in Cooperstown, and Oneonta. In this study I will assess the population genetics of these non-native populations relative to the populations in their native ranges to understand the evolutionary genetics of non-native species. I will be assessing genetic divergence and diversity differences between the native populations from California and the non-native populations near Oneonta. First, I will plant seeds from California in the greenhouse to obtain tissue; I will also collect tissue and seeds from the non-native populations. I will then perform DNA extraction and utilize genome-wide sequencing on all individuals sampled from both the greenhouse and the non-native populations. From these results, I will analyze how genetic structure, and diversity has changed over time relative to the wild native populations from California. I predict that the Western (native) and Northern (non-native) populations will differ genetically and in turn belong to different genetic populations. While no data is concrete at this stage of research, future analysis will reveal a pronounced understanding of contributing geographic and genetic factors surrounding genetic diversity. Assessing how and why non-native populations have genetically diverged from their native populations will further the understanding of evolutionary processes (e.g., selection, drift, or mutations) that have influenced non-native population.
Presenting: Wednesday 4/16 1-5pm

Students: Jack Millen, Ethan Biles
Faculty Sponsor: Joshua Nollenberg (Physics & Astronomy)

NASA's Rock On! Program

The SUNY Oneonta Department of Physics and Astronomy will be participating in NASA's Rock On! Program in June 2025. The Rock On! Program invites colleges and universities to travel to NASA's Wallops Space Flight Center to build geiger counters and to launch those geiger counters into space on a suborbital rocket. The radiation measurements made by these devices are used as a part of the calibration of incoming cosmic radiation at the top of the atmosphere. As a result of participating in this program, SUNY Oneonta students aim to join the subsequent Rocksat-C Program, in which we intend to design and build our own scientific payload for suborbital flight.
Presenting: Wednesday 4/16 1-5pm

Student: Caleigh Millette (G)
Faculty Sponsors: Alex Sotola, Daniel Stich (Biology)

Assessment of Watermilfoil (*Myriophyllum* spp.) Influence on Native Aquatic Plant Communities in the Lake Champlain Basin ☼

Aquatic invasive species are an issue prevalent throughout the Lake Champlain Basin (LCB), specifically the *Myriophyllum* spp. group and particularly Eurasian watermilfoil (EWM; *M. spicatum*). EWM has been known to degrade water quality, impact economic and recreational values of waterbodies, and negatively influence native plant communities throughout its invaded range. Much remains unknown about the extent of hybridization among the milfoil genus, implications for invasive species management, or impact on native species particularly in the Lake Champlain Basin. Although point intercept sampling provides a valid approach to data collection, these traditional methods fail to account for non-detection of uncommon species because of how surveys are

conducted and analyzed. Because of this, we are using more rigorous methods that account for imperfect detection of species within sites, such as occupancy modeling, in the place of traditional methods. Occupancy modeling is widely used for these types of data in wildlife and terrestrial ecology, but to a lesser degree in the study of aquatic plant communities. During our first field season (2024), we collected presence/absence data at 8 waterbodies in the LCB via SAV surveys at randomly assigned points and plan to repeat this process during the 2025 field season. Preliminary occupancy estimates for Hortonia Lake, VT showed that presence of EWM displayed a weak, positive association with the presence of all native aquatic plants. Because this association is weak, it suggests that a deeper investigation into environmental covariates such as bottom substrate type and water depth may play a larger role in plant distribution. Application of this approach to monitoring native aquatic plant biodiversity will provide a robust framework for testing hypothesis about the effects of *Myriophyllum* and may yield novel insights into long-standing management questions.
Presenting: Wednesday 4/16 1-5pm

Student: Kari Minissale (G)
Faculty Sponsor: Daniel Stich (Biology)

Assessing American Eel Distribution and Stream Fish Assemblages in the Upper Susquehanna River, NY ★☼

American eels (*Anguilla rostrata*) are the only species in the genus Anguilla native to North America and were historically abundant in watersheds along the Atlantic coast. The American eel population has declined in recent decades, leading to an increase in conservation efforts. This trend has been seen within the Susquehanna River watershed. Man-made barriers to migration, such as dams, inhibit upstream movement of eel and limit their access to suitable rearing habitat. With this study, we aimed to ascertain the presence or absence of American eels at sites around the Upper Susquehanna River Watershed using paired electrofishing and eDNA sampling. This work builds on ongoing collaborative efforts among state and federal organizations alongside SUNY Oneonta and the Susquehanna River Basin Commission (SRBC) and will inform monitoring and management of American eels in the watershed. We also established a baseline understanding of stream fish community metrics within the upper Susquehanna River by examining patterns in stream fish biodiversity.
Presenting: Wednesday 4/16 9am-1pm

Student: Jenell MooGetoun
Faculty Sponsor: Kiyoko Yokota (Biology)

The Effect of Light Levels on Cyanobacteria Growth

Cyanobacteria are photosynthetic organisms important to ecosystems by being a primary oxygen producer and some species being able to perform nitrogen fixation. This study aimed to investigate how light levels affected the growth of cyanobacteria from wintertime lake sediment. I hypothesized that increasing light availability leads to increased production of cyanobacteria. In this experiment, a liquid growth medium was added to lake shoreline sediment from a location where cyanobacterial blooms occurred during summer-fall 2024 and exposed to no light and 49 $\mu mol\ s^{-1}\ M^{-2}$ (low) and 175 $\mu mol\ s^{-1}\ M^{-2}$ (high) of photosynthetically active radiation for 5 days. The responses to the light treatments were measured by counting the number of identifiable photosynthetic cells present in each sample using a compound microscope. The results of the experiment did not support my hypothesis that higher light levels lead to increased growth of cyanobacteria. Other photosynthetic organisms like diatoms, however, were present, which suggested that the higher light level promoted them to emerge from the sediment first rather than cyanobacteria. Many experimental errors possibly contributed to the results of the experiment. Further experimentation of light levels as well as temperature is important to understand the optimal conditions for cyanobacteria to be released from sediment in early spring and increase its population as water temperature increases.
Presenting: Wednesday 4/16 1-3pm

Student: Anthony Moore
Faculty Sponsor: Barbara Durkin (Business)

Sustainability in the Food Industry ☼

Sustainability has increasingly become a globally discussed topic as concerns around its many aspects arise. These concerns stretch to economic, societal, and environmental impacts. As a result of this, several industries have been carefully analyzed to determine if their practices with regard to society, the economy and the environment are positive or negative. Industries with sustainable practices typically see expansions on their positive impact while those with less sustainable practices are closely analyzed as global solutions are sought after. One of the industries thoroughly examined is the food industry. Given the global importance of this industry, examining it through the lens of sustainability is crucial. Despite innovations in producing, harvesting, and transporting of food over the last few centuries, there are some issues regarding how sustainable these methods are as their impact continues to grow each year. Society has a role to play in the food industry's sustainability challenges. Dietary preferences and cultural restrictions affect the types of food produced in certain areas. This means energy and resources are dedicated to fit the needs of consumers in that particular region. Along with this, the average amount of calories consumed has increased over the years as well. Additionally, the growing population across several countries increases the amount of food demanded, thus further raising the amount of energy used. The food industry has massive effects on the economy as well. Globally, imports and exports contribute billions of dollars across various food groups. The energy used to produce the food leads to massive costs, however with an increase in food waste and loss, this also means money is being lost. On top of that, as grocery store shelf space becomes increasingly more competitive, e-commerce selling channels that eliminate the need for a third party and give groceries directly to the consumers, have been closely looked at as a beneficial alternative. As food waste and loss increases, so does the impact on the environment. This leads to greenhouse gas emissions which are bad for the environment. The lack of visibility of the food sustainability performance within the supply chain is a major concern as well. Farmers and producers are not paying close enough attention to their fertilizer usage, greenhouse gas emissions, and soil erosion.

Presenting: Wednesday 4/16 10am-12pm

Student: Lori Murphy (G)
Faculty Sponsor: Miranda Kearney (Biology)

The Effects of Allelochemicals from Two Native Flora on the Germination and Development of Invasive Plant Species in New York State ☼

Allelopathy is an occurrence in which some plant species can produce biochemicals that affect germination, reproduction, and development in surrounding plants to inhibit the growth of competitor species within the same area. Allelopathy has been suggested as a contributing factor to the success of some invasive plants. However, many native species also possess allelopathic properties, and thus, some natives may have the potential to function as an important control for invasive plants. Research has shown that native allelochemicals can effectively limit the germination and growth of invasive plants. However, literature in regards to the subject, while growing, is still relatively limited. More research is needed to explore the potential role allelopathic native plants could play in facilitating ecological restoration in locations impacted by potentially susceptible invasive plant species. Our research will take place in two phases, designed to investigate laboratory and in situ dynamics of allelochemicals. First, in a lab-based experiment, we plan to investigate the allelopathic properties of two native northeastern flora on the germination of two invasive plant species found across multiple counties in NY, including Ostego County, NY where this research will occur. We will evaluate germination by using Petri dishes with filter paper soaked in the allelochemical leachate solutions and distilled water as a control. Seeds of both of the target invasive species will be spread on the moistened filter paper and germination will be monitored by counting the number of seeds that

germinate. These will be compared to the control treatment to determine the impact of native species litter leachate on invasive seed germination. In doing so, we can apply the results from this tightly regulated experiment to a field-based environment to test whether allelochemicals from native species can affect the growth and development of invasive plant species in situ. This research will be followed by a field-based study to investigate the influence of the application of leaf litter from the same two native species on the growth and development of invasive species located in situ. Specifically, we will investigate the effectiveness of two native species with known allelopathic properties, black walnut (*Juglans nigra),* and goldenrod (*Solidago* spp.) on the germination of Japanese stiltgrass (*Microstegium vimineum)* and garlic mustard *(Alliaria petiolata)* seeds. These species were chosen in an effort to align native and invasive species by means of habitat overlap. The invasive species sites will have the allelopathic species leaf-litter applied to them in random gridded areas, and monitored

Presenting: Wednesday 4/16 2:30-5pm

Student: Alexa Nanes

Faculty Sponsor: Alex Sotola (Biology)

Assessing Population Genetics and Introgression Between Stocked and Wild Lake Trout in Otsego Lake ☼

Salvelinus namaycush, the lake trout, is a North American char species that resides in cold, freshwater habitats. It is a highly sought out catch as both a game and a food fish, but this popularity has led to many of its populations becoming overfished. Lake trout numbers began to diminish as a result of overfishing, which raised concerns for conservationists and hatchery managers. To replenish dwindling populations, stocking became commonplace in many of the North American water bodies that lake trout inhabit. Otsego Lake, which lake trout are endemic to, has been stocked with the species since 1872. For the first time in a while, young lake trout have been recently observed in Otsego Lake. This discovery establishes the question, are the young trout offspring of stocked fish, wild fish, or both? To answer this question, processing genetic data from native fish and hatchery fish is required. Fin clips have been collected from hatchery fish and wild fish found in Otsego Lake to extract DNA from and sequence. By processing the data from sequencing, I can analyze the genetic makeup of fish found in Otsego Lake and see which groups have been reproducing. This question has conservation implications which are valuable to the NYSDEC and anglers who enjoy fishing for lake trout. Stocking takes a lot of time and energy, so if it is no longer necessary to stock the lake as frequently, it would be important for the NYSDEC to know.

Presenting: Wednesday 4/16 1-5pm

Student: Alexa Nanes

Faculty Sponsor: Fred Zalatan (Biology)

Jumping from the North to the Yeast with Ty1: Measuring Ty1 mRNA Levels in Mutant Strains of Yeast Using Northern Blotting

Transposons are segments of DNA that relocate from one location in a genome to another, contributing to mutations as well as genome plasticity. Ty1 is a transposon that is found in *Saccharomyces cervevisiae*, commonly known as baker's yeast. It uses reverse transcription to replicate, similar to how retroviruses (such as HIV) replicate. The Clathrin protein complex, which has an important role in the cellular uptake process of endocytosis, may play a role in Ty1 function. Previous studies from our lab have shown that mutant yeast strains with deletions in either of the two genes that make up the Clathrin complex show increased levels of the Ty1 Gag protein. These findings have led to the question of whether Ty1 mRNA levels are changing in these Clathrin mutant strains. To address this question, RNA measurements using the northern blotting technique are currently being utilized.

*Presenting**:** Wednesday 4/16 1-5pm*

Student: Nicole Navarrete
Faculty Sponsors: Maria Chaves-Daza, Roberto Rincon (Africana & Latinx Studies)

Living in Fear: The Mental Health Impact of Deportation Threat on Central American and Documented Immigrants in the United States ★

Undocumented immigrants from Central America, living in the United States face significant mental health challenges due to the persistent threat of deportation, legal uncertainty and barriers to obtaining legal status. This research frames the historical factors driving migration from Central America and the legal struggles immigrants face in seeking residency. Through research, participant observation, and existing data this project examines the correlation between undocumented status and mental health disparities. I explore the psychological impact of living under *the threat of deportation*, with a focus on increased levels of anxiety, depression, and PTSD. Encapsulating these issues, this research aims to advocate for improving health resources and inform broader discussions on the well-being of undocumented communities in the United States.

Presenting: Wednesday, 4/16 1-5pm

Student: Keelin Needham
Faculty Sponsor: Wendy Lascell (Geography & Environmental Sustainability)

Water Quality in Guatemala: Local Community Outreach Project ☼

The poor water quality of Lake Atitlán is a health risk to the residents of Santa Catarina, a small village in Guatemala. Sewage and nutrient influx into the lake contributes to cultural eutrophication, which leads to the presence of harmful bacteria such as *E. coli* in the drinking water supply. As a result, illnesses and fatalities are common in the community, particularly among children. One effective solution to this issue is the implementation of plastic water filters equipped with ceramic candles, which require annual replacement to maintain their effectiveness. Due to the high poverty rate in this area, most families cannot afford to replace the candles as needed. After participating in a faculty-led study abroad program to the lake in 2023 with Dr. Tracy Allen, I developed a passion for assisting the community with this problem. This project aims to raise awareness of the water crisis in Santa Catarina and generate funds for the ceramic filter candles. It can be linked to several of the UN Sustainable Development Goals, but goal #6: *Clean Water and Sanitation* is the most relevant. Through community engagement, particularly within the Greek Life community at SUNY Oneonta, outreach efforts will include on-campus tabling events, presentations, and the use of social media. The expected outcomes include increased awareness among SUNY Oneonta students and the collection of funds to supply additional ceramic candles to the community. By securing these resources more families in Santa Catarina will gain access to clean drinking water, significantly improving their health and quality of life.

Presentation Session: Wednesday 4/16 9am-1pm

Student: Olivia Neumann
Faculty Sponsors: Thomas Beal, Matthew Hendley (History)

The Prosecution and Persecution of the "Sodomite Subculture" in London, 1690-1760

Eighteenth century England faced a crucial reimaging and spike in legal action towards cases of sodomy between men. This change was the result of the growth of urbanization in London, which encouraged sexual diversity as well as the exposure of a homosexual subculture of male sodomites. This research explores the relationship between social change and legal action against male sodomy based on cases and data from the Old Bailey Proceedings between 1690 and 1760. The study begins by discussing how sodomy and homosexuality were viewed legally and socially before and during the 18th century with an analysis of the Buggery Act of 1533 and the development of the Society for the Reformation of Manners in 1690. These events were significant to social order as well as evangelical ideology and established the role of the law in facilitating social oppression. The Society for the Reformation of Manners would enforce numerous efforts and extortion plots to bring the case of

homosexuality and sodomy to the public eye and the courts of England at a higher rate. The Society will also be connected to discourse relative to the advent of molly houses as a space for homosexual expression and two significant cases: the case of Captain Edward Rigby in 1698 and the execution of three sodomites in 1726. To accommodate this research, several court records from the Old Bailey database and various scholarly publications in social and legal history from notable scholars like Robert Trumbach and Rictor Norton are considered. These secondary sources allow for an effective analysis of the information from the Old Bailey. These cases and the Society for the Reformation of Manners are then analyzed together to provide an effective understanding of the spike in persecuting cases of male sodomy in the 18th century. This historical study is relevant to struggles in our modern era, including the evolution of laws against homosexuality in Britain as well as the current climate of London's LGBTQIA+ culture. This research is significant to understand the intersectionality of law and society, exposing how sexuality faces both diversity and threats in times of social change in past and modern periods.
Presenting: Wednesday, 4/16 9am-1pm

Student: Jessica Nimar
Faculty Sponsor: Florian Reyda (Biology)

A New Species of Rhinebothrium from the White-Edge Freshwater Whipray (*Fluvitrygon signifer*) from Borneo

In our study we focused on a potential new species of Rhinebothrium (Cestoda: Rhinebothriidea) found in the white-edge freshwater whipray (*Fluvitrygon signifer*) from the Kapuas River in Borneo. The current project focuses on a single new species of Rhinebothrium from F. signifer with notably narrow bothridia, but we note that there were a total of two species encountered in this whipray, both possibly new. Scanning electron micrographs were obtained from two scoleces. Measurements of whole mounts of eight mature specimens that were stained with Delafield's Hematoxylin were taken with a Leica DM 2500 microscope. Those measurements will be compared with the approximately 40 other species in the genus. In this poster presentation we highlight general features of this potentially new species and provide some comparative results that we have in hand at this point in this project.
Presenting: Wednesday 4/16 10-11am; 2-5pm

Student: Kaelin O'Connor
Faculty Sponsor: Barbara Durkin (Business)

Willingness to Choose Sustainably-Sourced Products: A Student Perspective ★ ☼

This project will explore how Gen Z students perceive sustainably sourced products and how this impacts their willingness to purchase these products. Sustainably sourced relates to ethical practices of sourcing and ensuring fair labor standards are practiced. This study builds on the literature regarding customer interest in sustainable products. It specifically addresses a gap in the literature analyzing the interest of Gen Z college students in sustainably sourced products using and analyzing foundational Supply Chain Management (SCM) principles. This research will create value as organizations develop marketing campaigns targeting this demographic by highlighting compliance to ethical practices. Additionally, it provides support for organizations to reference the United Nations Sustainable Development Goals (SDG's) in its supply chain and marketing efforts. Hypothesis: Generation Z students will consider sustainable sourcing as a factor in selecting products. The specific aim for this project is to provide a clearer understanding of how students perceive sustainable sourcing and how this impacts their purchasing behavior. Members of Generation Z and, in particular college students (i.e., generally those born in the early 2000s), are major contributors to the market based on their buying behaviors. This research will analyze the perceptions of students concerning sustainably sourced products. The focus will be to assess the level of Generation Z's knowledge concerning sustainably sourced products and the degree to which this knowledge has an impact on their willingness to consume these products. This knowledge additionally has the potential to exert

more pressure on firms to consider the United Nations Sustainable Development Goals (SDGs), specifically SDG 12 (Sustainable consumption and production patterns) in its business operations.
Presenting: Wednesday, 4/16 9-1-5pm

Student: Jessica Ozner
Faculty Sponsor: Florian Reyda (Biology)

A New species of Anthocephalum from the White-Edge Freshwater Whipray (*Fluvitrygon signifer*) from Borneo ☼

In our study we focused on a potential new species of Anthocephalum (Cestoda: Rhinebothriidea) found in the white-edge freshwater whipray (*Fluvitrygon signifer*) from the Kapuas River in Borneo. Scanning electron micrographs were obtained from two scoleces. Measurements of whole mounts of five mature specimens that were stained with Delafield's Hematoxylin were taken with a Leica DM 2500 microscope. The new species was compared to other measurements of other Anthocephalum species and was found to be most like *Anthocephalum ruhnkei* which was described from *Urogymnus granulatus*from the Solomon Islands and from the Northern Territory of Australia. The new species can be distinguished from A. ruhnkei in that it is longer and possesses more proglottids, and via the distribution of its vitellaria, which run the length of the proglottid, unlike those of A. ruhnkei. Our study provides further evidence that, while the known species diversity of Anthocephalum is high at a current count of 30, many additional species of the genus await discovery in as of yet unexplored species of batoid elasmobranchs.
Presenting: Wednesday 4/16 1-5pm

Students: Darian Paul, Caleigh Millette (Gs)
Faculty Sponsors: Alex Sotola, Daniel Stich (Biology)

A Population Genetic Survey of Watermilfoil Species Across the Lake Champlain Basin ☼

Every year, lake associations within Lake Champlain Basin spend millions of dollars to manage Eurasian watermilfoil, an aggressive invasive aquatic plant species. Eurasian watermilfoil can degrade water quality and compete with native plants, decreasing lake's economic value. Previous studies discovered Eurasian and northern watermilfoil, a native watermilfoil, produce hybrid offspring displaying increased growth and herbicide resistance. The genetic structure, diversity, and hybridization of watermilfoils with the Lake Champlain Basin, and how that impacts management practices, is currently unknown. This study will gather watermilfoil specimens throughout the Lake Champlain Basin and utilize genome-wide sequencing techniques to address this knowledge gap. These data will assist in confirming the biotypes of watermilfoil present throughout the Basin as phenotypic features are often unreliable in identification especially in the presence of hybrid watermilfoils. Phenotypic data will additionally be documented and analyzed for statistical correlation with genetic ancestry. The aim is to update identification guides if a feature is discovered that allows for accurate morphological determination between watermilfoil species and hybrids. Knowledge of the biotypes in a given waterbody and updated phenotypic identification or ranges from this study will be available to lake associations and managers in the Lake Champlain Basin to assist their management decisions.
Presenting: Wednesday, 4/16 1-5pm

Student: Daisy Perez-Reyes
Faculty Sponsors: Maria Chaves-Daza, Roberto Rincon (Africana & Latinx Studies)

Fields of Fear: Exploitation of Mexican and Immigrant Women ★ ☼ 

My project explores the issues of sexual harassment and violence that female farmworkers. I focus on Mexican and immigrant women in upstate New York. Pervious academic research identifies power imbalance, lack of legal protection, fear of retaliation, mental health and other health disparities impact these communities. Key findings how farm working women faced verbal, physical, and mental harassment from supervisors and/or coworkers, often because of language barrier, job

insecurity and immigration status. These workers struggle because of inadequate sex education, which could lead to vulnerability to sexually transmitted infections. The literature explores the efforts of advocacy groups and organizations to fight against the injustices which include policy reforms, better enforcement of labor laws, and providing support and education for affected workers. Organizations are key to raising awareness to the issues women face in farm work. My analysis reveals that there is a need for systematic change to ensure safety, rights, and dignity of women in agriculture labor.
Presenting: Wednesday, 4/16 1-5pm

Student: Benjamin Peterson (G)
Faculty Sponsor: Jeffrey Heilveil (Biology)

Community Composition of Caddisflies in the Upper Susquehanna Tributaries ☼

The Susquehanna is one of the largest rivers on the east coast of the United States, and is heavily used for agriculture, recreation, and energy production for New York, Pennsylvania and Maryland. In spite of the importance of this waterway and the Clean Water Act's requirement for water monitoring, stream monitoring is rarely done on most of the river's numerous tributaries. When monitoring is done, it often involves looking at the members of three insect orders: the mayflies, stoneflies, and caddisflies. Unfortunately, little is known about caddisfly community composition in the tributaries of the Upper Susquehanna. The purpose of this research was to examine the community composition of caddisflies within tributaries of the Susquehanna River upstream of Oneonta, New York, to determine patterns of species diversity and habitat use. Streams were sampled once per season for two years, with each habitat sampled separately. Captured caddisflies were identified to genus and abundances were used to model which factors best predict the presence of a genus. Data to date shows site and habitat to be most significant factors for species richness (number of different species) and season most significant for abundance (total number).
Presenting: Wednesday 4/16 9am-1pm

Student: Trey Pratt
Faculty Sponsor: Annacleta Chiweshe (Human Ecology)

Stripped Away: Fur in Fashion, Class & Conscience ★ ☼

The use of fur in the fashion industry has become associated with elitism and luxury, losing its cultural significance and value. While many advocate for its end due to animal welfare and ethical concerns, its alternative, faux fur, is unsustainable. This creative project aims to highlight the impact of fur on the fashion industry, animal well-being, and the environment. This independent study will ultimately act as a form of activism within the fashion industry; calling attention to the malpractices and shedding light on the true issues and stories typically misconstrued. It will introduce my design beliefs and build a base for the small fashion brand I am beginning – sustainability, animal welfare, inclusivity, and ethicality. Thus, providing industry improvement. This independent study collection is more than just 10 ensembles, it is a political message of behaviors that need to stop for the industry's growth in the everchanging economic values.
Presenting: Wednesday, 4/16 9am-1pm

Student: Victoria Prouty (G)
Faculty Sponsors: Elizabeth Bastiaans (Biology), Jacob Warner (Geography & Environmental Sustainability), Donna Vogler (Biology)

Changes in Shell Symmetry and Diet in Populations of the Wood Turtle,
Glyptemys insculpta ★ ☼

Factors contributing to population declines in herpetofauna across the northeastern United States, such as anthropogenic disturbance, habitat degradation, and landscape fragmentation, may also be linked to changes in an organism's physiology. We conducted field surveys at a highly disturbed site

in Oneonta, New York to locate, photograph, and collect carapace and claw samples from wood turtles (*Glyptemys insculpta*). We compared fluctuating asymmetry in the carapaces and plastrons of modern wood turtles to historical wood turtle specimens captured from a range of sites near the Oneonta region between the 1950s-1960s. Additionally, we conducted a stable isotope analysis of $\delta^{15}N$ and $\delta^{13}C$ in modern and historical wood turtle carapace and claw tissues. Our results revealed that modern turtles had the highest levels of asymmetry in both their carapaces and plastrons, and that the presence of a shell deformity substantially increased asymmetry. These results suggest that modern wood turtles may be exposed to suboptimal conditions during development, which may be increasing levels of asymmetry in both the carapace and plastron. This increase in asymmetry may be attributed to higher temperatures during incubation, population isolation and reduced gene flow, and stress from anthropogenic interference in their preferred habitats. Stable isotope analysis of $\delta^{15}N$ and $\delta^{13}C$ in carapace samples and claw tips revealed that modern wood turtles had significantly lower $\delta^{15}N$ and $\delta^{13}C$ signatures and trophic positions than historical turtles. There were also significant differences in $\delta^{15}N$ and $\delta^{13}C$ values between shell and claw tissue samples, between adult and juvenile turtles, and between years in historical turtles. Studying the diets and physiology of wood turtles will allow scientists to improve conservation initiatives by making meaningful suggestions about how to increase food availability and decrease developmental instability in disturbed habitats.
Presenting: Wednesday, 4/16 1-5pm

Student: Dalton Reagan
Faculty Sponsor: Alex Sotola (Biology)

Assessing Restriction Site Evolution by Exploring Genome Differences Between Zebra and Quagga Mussels ☼

The Dreissena is a small freshwater mussel genus, which includes the zebra mussel (*Dreissena polymorpha*) and the quagga mussel (*Dreissena bugensis*). Both species are prominently known as invasive species in North America, particularly in the Great Lakes region. In this region they are known to drastically alter aquatic ecosystems and can outcompete and displace native species. These Dreissenids are found in overlapping ranges where there is speculation of interspecific hybridization or reproduction between these two different species. Hybridization is an important natural evolutionary process and can be used to inform conservation and management efforts, life-history information, and the evolutionary processes of speciation. Hybridization between two non-native species can lead to increased proliferation and the increased spread of ecological impacts. In this study, we initially used genotyping-by-sequencing (GBS) as a bioinformatic approach to explore hybridization between zebra and quagga mussels. Genotyping-by-sequencing is a cost-effective and useful method used to address hybridization. GBS generates genome-wide single nucleotide polymorphisms (SNPs) which help to identify hybrid individuals. The data were provided from a previous study in the Great Lakes and inland lakes of Michigan. Their methods involved DNA extraction, digestion with restriction enzymes, and DNA sequencing, resulting in the generation of 689 FASTQ files. Each file served as zebra and quagga mussel individuals which were further processed using a more modernized approach (GBS). We converted each file, utilized the zebra mussel reference genome for variant calling, filtered, and estimated for genotype probabilities and admixture proportions. This method unsuccessfully determined any potential hybridization because the sequences were not aligning; this is indicative of restriction site evolution. This means that the restriction sites, which are the locations where enzymes cut the DNA, may have evolved differently between the two species, potentially leading to our results. Further, we downloaded the Linux Artemis Comparison Tool (ACT) which is used to visualize and compare genomes. This will allow us to directly compare quagga and zebra mussel genomes to determine if the restriction cut sites have diverged to different locations. This analysis is currently being done, and if restriction site evolution is proven, then hybridization is unlikely, and these two species are more genetically diverged than previously realized.
Presenting: Wednesday 4/16 9am-1pm

Student: Skyler Reed
Faculty Sponsor: Joshua Nollenberg (Physics & Astronomy)

A Deeper Look into the Close Gravitational Environment of Quaoar

Quaoar is a trans-Neptunian object at approximately 43.3 astronomical units from the Sun. The Quaoar system is home to two rings and a moon named Weywot. The rings reside between radii of approximately 2500km and 4000km (Perrier et al 2023), with the moon revolves in orbit at around 13300km from the center of Quaoar. Previously, using the N-body numerical methods, we explored the dynamics of the rings by investigating changes to ring particle orbital parameters caused by the Moon. We discovered that the entirety of the system is unstable if particles start from the origin. However, we now attempt to find out if that is the case for various staring points. We also look deeper into the system to be able to study more about the dynamics of the orbits of the bodies in hopes to be able to apply this to relativistic binaries.

Presenting: Wednesday 4/16 9am-1pm

Student: Gillian Reimer
Faculty Sponsors: Wendy Lascell (Geography & Environmental Sustainability), Lindsay Wolfanger (Office of Sustainability)

Analyzing Awareness and Diverting Food Waste: A Campus Based Analysis ☼

Food production and food waste is a widespread issue, contributing to environmental, economic, and social problems related to sustainability. Climate change, biodiversity loss, and food insecurity are just a few of the problems. This project, as part of my role as the Waste Reduction Intern with the Office of Sustainability, aims to raise awareness and further develop food waste diversion initiatives at SUNY Oneonta. Since Fall 2024, I have been working to divert post- consumer food waste by collecting compost weekly at Bugbee's Children Center. Data collection involved weighing food waste generated, gathering feedback on campus awareness, and determining average waste per month. In the role of Intern, I also delivered a lesson to the Bugbee children to educate them about composting, with the hope of being able to convert the lesson for future use to a larger college- aged audience. Ultimately, this project strives to support sustainability as a core value at SUNY Oneonta through continued food waste diversion efforts and educational awareness.

Presenting: Wednesday 4/16 9am-1pm

Student: Gillian Reimer
Faculty Sponsor: Florian Reyda (Biology)

2024 Fish Parasite Survey of Otsego Lake, New York: Ties to Biodiversity and Host-Parasite Dynamics ☼

This project builds on a long-term survey of fish parasites in Otsego Lake that has been ongoing since 2008. A total of 126 fish representing 18 species and seven families were collected via electro-fishing, angling, trap nets, and gill nets from various sites on Otsego Lake and its tributaries between May and November 2024. Fish were necropsied and examined for parasites in the digestive systems, body cavity, and other organs. Helminths were fixed according to conventional practices for further morphological study and subsequently prepared as whole mounts following staining with Delafield's Hematoxylin (for trematodes and cestodes) and Semichon's acetocarmine (for acanthocephalans and nematodes). The parasitological results of the work in 2024 are consistent with previous findings, with various genera of parasitic worms commonly found in the digestive tracts and body cavities of fish, some being found in the heart and liver as well. Notable findings include extensive gill clubbing in *Micropterus dolomieu* and *Ambloplites rupestris* that were infected with the copepod *Ergasilus centrarchidarum*, widespread infections of *Neoechinorhynchus cylindratus*in centrarchid fish, and a disparity in *Leptorhynchoides thecatus* infections that had been previously reported as common. Ancillary observations from our survey work include evidence of predation of the invasive quagga mussel, *Dreissena bugensis* that by *Perca flavescens*, *Salvelinus namaycush*, and *Coregonus*

clupeaformis. Our results provide insights on the populations, diets and trophic interactions of fish species in the ever-changing ecosystem of Otsego Lake.
Presenting: Wednesday 4/16 3-5pm

Student: Gillian Reimer
Faculty Sponsor: Florian Reyda (Biology)

Exploration of Microcystis Consumption by the Zooplankton *Daphnia* sp. in Otsego Lake ☼

Over the past decade, harmful algal blooms (HABs) have become increasingly persistent in freshwater lakes, with cyanobacteria, particularly *Microcystis aeruginosa*, being the most common algae associated. In Otsego Lake, the first major cyanobacterial bloom occurred in 2022, leading to concerns about the ecological and public health impacts of these blooms. Zooplankton, specifically species of the crustacean genus *Daphnia*, are one of the most important and efficient grazers that have potential to control cyanobacterial blooms. The objective of this research is to assess *Daphnia* species' ability to ingest *Microcystis* sp. and explore their diet preferences. Between July and December 2024, plankton tows were conducted, and 17 *Daphnia* sp. specimens were dissected to analyze their gut contents. The results revealed that over 80% of specimens contained cyanobacteria, likely *M. aeruginosa* colonies. Other notable results include the presence of the golden algae *Dinobryon ehrenberg* being noted as one of the most abundant organisms in their diet. We also encountered spores of a microsporidian, possibly *Hamiltosporidium*sp. in the gut smears, but these intracellular parasites were likely from the cells of reproductive organs and not part of the gut contents. These findings provided insights into the filtering capabilities of *Daphnia* sp., as well as their potential role as controllers of cyanobacterial blooms.
Presenting: Wednesday 4/16 9am-1pm

Student: Eleanor Rettew (G)
Faculty Sponsor: Jeffrey Heilveil (Biology)

An Uncommon Stonefly: Investigating the Genetic Diversity of *Tallaperla maria* in New York State ★ ☼

Stoneflies provide many benefits to both humans and ecosystems: these insects are indicators of water quality for aquatic researchers, bait for trout anglers, and food for fish and birds. Unfortunately, stoneflies are also one of the most endangered groups of insects, due to their small, isolated populations and low tolerance for pollution. This project will investigate the genetics of one uncommon stonefly species, the (ironically-named) common roachfly (*Tallaperla maria),* in New York State. The goal of this project will be to provide a foundational understanding of the spatial and genetic distribution of this species, so that we can better predict the effects of climate change and ecological degradation on *Tallaperla maria* and the ecosystems they inhabit.
Presenting: Wednesday 4/16 9am-1pm

Student: Brittney Rhodes
Faculty Sponsors: Rachel Kornhauser (Office of Sustainability), Wendy Lascell (Geography & Environmental Sustainability)

Enhancing Recycling Education at SUNY Oneonta ☼

Proper recycling practices on college campuses play an important role in waste reduction and sustainability. However, misinformation and lack of awareness often lead to improper disposal of materials. Despite existing recycling initiatives, a considerable portion of recyclable materials on campus are thrown into the trash bins. This project will assess the current state of recycling education and outreach efforts at SUNY Oneonta and explore new strategies to bridge the educational gap. Data includes waste audits and an analysis of campus outreach materials to identify gaps in knowledge and participation. Based on these findings, a strategic plan will be developed for the Office of Sustainability to implement enhanced educational methods, including improved signage, recycling campaigns, competitions, and using technology. The goal is to increase student recycling and create a

more effective waste management system. By comparing current outreach effectiveness with practices from other institutions, this project will provide practical recommendations to strengthen recycling education and contribute to broader campus sustainability efforts.
Presenting: Wednesday 4/16 1-5pm

Students: Morgan Richards, Ian Schneider
Faculty Sponsor: Yoko Takagi (Psychology)

Emerging Adulthood and Morality: An Analysis of Moral Reasoning Using Real Life Moral Dilemmas

One of the main goals of morality research is to understand how the structure of morality changes (Kohlberg, 1981) and is expressed across the lifespan. For this study, we narrow in on a specific developmental period: Emerging adulthood (ages 18-25) of Generation Z (born in 1997-2012). Past research has characterized this developmental period as being particularly relativistic in their moral thinking (e.g., Kolberg & Kramer,1969; Smith, 2011, Takagi & Saltzstein, 2022; Turiel, 1977). In addition, past research shows that situational factors can often create gaps between moral thinking and moral action (e.g., Perkins & Turiel, 2007; Takagi et al., 2018). Accordingly, the main goal of the current study was to explore different reasoning or approaches which emerging adults used when resolving moral dilemmas, specifically to understand whether they displayed relativistic orientation in their moral reasoning. In order to better understand these characteristics, we collected written narratives about moral dilemmas that emerging adults have personally experienced in their own lives. Participants are asked to recall a time in which they were unsure of what the correct or morally right thing to do was (i.e., the Kantian definition). We analyzed two sets of data (collected in 2022 [before WHO declared the end of the COVID-19 pandemic in May 2023] and 2025) to examine any differences in types of encounters (i.e., moral genres) and approaches to resolutions. We devised a coding system which captures prototypical (e.g., deontological, consequentialist, virtue) and unique (e.g., moral relativism, moral compromises) approaches that participants used in their reasoning. In addition, the coding system was designed to uncover the extent to which emerging adults relied on "affect" (i.e., using affective terms [based on significance analysis]). Thus, our attempt would partially answer the question of the moral affect and cognition controversy. Lastly, a separate coding scheme was also employed to characterize the kinds of moral dilemmas that these emerging adults experienced (moral genres). At the conference, both qualitative and quantitative results will be presented and extensively discussed in terms of developmental meanings.
Presenting: Wednesday 4/16 9am-1pm

Student: Kaiden Ring
Faculty Sponsor: Shahin Kachwala (Women's & Gender Studies)

Beyond Carceral Responses: Community and Intersectionality in Accountability Programs ☼

Intimate partner violence (IPV) is a pervasive form of violence with severe consequences for not just survivors but communities in general. In my research paper, I analyze the ways in which accountability programs in cases of IPV can be made more effective with the application of an intersectional approach. Traditional approaches to IPV intervention, including carceral responses, often prioritize punishment over accountability while ignoring the systemic factors that contribute to interpersonal violence. My paper surveys the use of accountability programs as an alternative intervention strategy, highlighting the importance of an intersectional framework to improve their effectiveness. By evaluating statewide standards and promising practices, in my paper, I identify challenges and opportunities for advancing intersectional accountability to encourage more effective and inclusive programs. I study different accountability programs and summarize the multifaceted factors influencing intimate partner violence. My analysis helps us understand the significant intervention efforts that are underway, and I suggest that accountability programs can become a more effective means of intervention for IPV while also addressing larger societal inequities that perpetuate

this violence by implementing an intersectional approach. Ultimately, by emphasizing the importance of inclusive and effective responses to intimate partner violence, I hope this research contributes to the broader discussion on criminal justice system reform.
Presenting: Wednesday 4/16 1-4pm

Student: Stephen Root (G)
Faculty Sponsor: Miranda Kearney (Biology)

Effect of Japanese Knotweed on Plant Succession in Riparian Areas within the Susquehanna River Watershed in Otsego County, NY ☼

Riparian forests provide critical ecosystem services, including streambank stabilization, water filtration, and support for biodiversity. However, the invasion of Japanese knotweed (*Reynoutria japonica*) and related species poses a threat to these ecosystems by altering plant community composition and reducing structural stability. This study investigates the effects of knotweed invasion on plant succession in riparian forests within the Susquehanna River watershed in Otsego County, NY. We will conduct plant community surveys in knotweed-invaded and uninvaded riparian plots at three study sites to assess species richness and diversity. Additionally, a planting experiment will evaluate the establishment and growth of three native riparian species (*Parthenocissus quinquefolia*, *Cornus sericea*, and *Pinus strobus*) within invaded and uninvaded plots, with and without biochar amendment to assess potential allelopathic effects. This research aims to enhance our understanding of native plant persistence and potential restoration strategies in knotweed-invaded habitats. Findings will inform management practices by evaluating the feasibility of direct planting as a restoration approach in riparian ecosystems impacted by invasive species.
Presenting: Wednesday 4/16 1-5pm

Student: Alaina Rullo
Faculty Sponsor: Sarah Simpson (Art)

Meghan's Voice ★ ☼ 

Meghan's Voice: Bear Witness is a multimedia art installation confronting the hidden and painful realities of domestic abuse. It tells the heartbreaking story of Meghan Kiefer, a young woman whose life was tragically cut short by domestic violence. The exhibit guides visitors through the phases of Meghan's relationship, illustrating the gradual escalation of abuse that ultimately led to her untimely death. The core mission of Meghan's Voice is to raise awareness about domestic violence by immersing viewers in Meghan's experience. By following her journey, visitors gain a deeper understanding of how abuse develops over time. Each stage fosters emotional connection, urging reflection on the widespread impact of domestic violence. As I developed this work, my artistic focus evolved. Research revealed that domestic violence is far more prevalent than I had thought—almost everyone knows someone affected by it. This realization shaped the exhibit's approach, shifting from solely telling Meghan's personal story to presenting a broader, more universal message. Meghan's Voice highlights the tragic reality that anyone could be Meghan, and anyone could be the abuser. By removing overly specific details, the work invites viewers to see themselves or someone they know within the narrative, making the issue deeply personal. In my original grant proposal, I cited Bevin Llanes, Meghan's mother, as my primary inspiration. Bevin's grief became a crucial element of the exhibition, leading me to expand the focus beyond the cycle of abuse to include the profound sorrow of those left behind. The mother-daughter dynamic became central to the project, emphasizing not only Meghan's loss but the enduring pain of a parent forced to bear witness to such an unimaginable tragedy. A key component of the installation is a series of seven months of calendars displayed on the walls, representing the cycle of abuse, the erosion of self-identity, and increasing isolation. In front of these calendars, framed photographs of a couple in happier times— their "public face" for social media—create a stark contrast to the reality of domestic violence. Nearby, black-and-white photographs capture moments of rage, exposing the hidden turmoil behind the facade. A life-size painting of "Meghan's" death is depicted through a white canvas cut to reflect the way she died. To

emphasize the mother-daughter relationship and the profound grief, vinyl-cut silhouettes illustrate their bond, culminating in a funeral scene. A silhouette of a mother draped over a casket is accompanied by a memorial wall featuring a portrait of "Meghan," a vase with flowers, and photographs capturing her as a happy person. Through this installation, I sought to convey the immense loss that follows domestic violence tragedies. By integrating personal storytelling with a broader narrative, Meghan's Voice serves as both a tribute to Meghan and a call to action. This exhibit compels audiences to confront the realities of domestic abuse, fostering awareness, empathy, and the collective will to prevent future tragedies. By bearing witness to Meghan's story, we bear witness to countless others—stories that must be heard, remembered, and acted upon.
Presenting: Wednesday, 4/16 1-5pm

Student: Thomas Rzeznik
Faculty Sponsor: Sen Zhang (Math, Computer Science, Statistics)

Prototyping an AI-Powered Software to Generate Lab Procedures for Linux and CyberSecurity ★

Generative AI (e.g. emerging large language models) has been transforming many aspects of how humans improve their everyday jobs, including in the field of education. This project aims to harness the power of generative AI to improve the personalized learning experience for those studying Linux and Cybersecurity, while also aiding instructors in creating customized educational content where covering many Linux distributions can be challenging. In particular, we prototype an AI-empowered Linux Lab Generator software. By using AI, the tool helps to generate labs that are contextualized, personalized and customized, allowing learners to dig deep into skill related commands based on their personalized background and gain complementary practical Linux experience. Key features include an integrated chat feature for real-time questions and clarifications, the ability to summarize generated labs for easier understanding, and formatting labs into readable documents. It provides a sharing feature, so if a similar lab has already been created and shared, the platform retrieves it, reducing redundancy, lowering the AI API token consumption, and improving efficiency. Prompt engineering and vectorized databases are used to restrict contextually relevant user input. For educators, the Linux Lab Generator simplifies creating structured tutorials, quizzes, and labs for their students. It encourages collaboration by allowing users to share custom labs within the community, fostering collective improvement of generated content. This dual-purpose design supports both students seeking interactive learning and instructors enhancing their teaching methods. This project highlights the transformative potential of generative AI in creating dynamic, effective, and engaging educational environments. Currently, we have applied Agile Software Engineering methodologies to fast prototype a minimum viable product and incrementally adding more features. The software is running on the cloud. This development of the software is partially supported by a 2024-2025 SUNY IITG project and a SUNY Oneonta student scholarship grant.
Presenting: Wednesday, 4/16 1-5pm

Student: Kayla Schwizer
Faculty Sponsor: Kiyoko Yokota (Biology)

The Effects of Motor Oil and Murky Water on Zooplankton Survival ☼

Zooplankton is comprised of organisms that are suspended in aquatic environments. These organisms, known as zooplankters, can be classified as either filter feeders or predatory feeders. Zooplankters are crucial for a successful aquatic ecosystem by being the primary food source for larger organisms. The experiment investigates how environmentally relevant pollutants- specifically motor oil and murky water sediment- affect the survival of filter-feeding zooplankters. I hypothesized that the exposure to motor oil and murky water sediment decreases zooplankters survival rates. The experiment studies zooplankters under environmentally relevant pollution and extends understanding of how stronger environmental pollutants may impact their survival in natural scenarios.
Presenting: Wednesday 4/16 10am-1pm

Student: Joseph Senchyshyn
Faculty Sponsors: Jacob Warner, Wendy Lascell (Geograaphy & Environmental Sustainability)

Investigating Agricultural Expansion in the Nepeña Valley, Peru ☼

The Nepeña Valley, Peru is home to some of the most unique archeological sites in the world. Unsustainable agricultural expansion in the Valley is threatening these archaeological sites along with local culture and biodiversity. The agro-industry of Peru is dominated by major agricultural firms whose goals never include sustainability. The unchecked agricultural growth has led to the loss of archaeological sites in the Nepeña Valley that represent Peruvian national identity. It has also resulted in unfair wages for locals, and destruction of local wildlife habitat. This study shows the spread of vegetation is covering archaeological sites in Nepeña Valley Peru while investigating the impacts of this growth. To investigate these dynamics, this study utilized a combination of four different methodologies: (1) satellite imagery analysis using GIS to assess vegetational changes, (2) examination of the Agroindustrias San Jacinto 2022 directory to understand agricultural practices, (3) literature review to show historical agricultural trends in Peru, and (4) firsthand experience while traveling in the Nepeña Valley. While in Peru, conversations with local residents and the examination of the archaeological site known as Pañamarca fueled my investigations. Highlighting the negative effects of unsustainable agriculture in the Valley can help to create advocacy for necessary change. Damage from agricultural expansion in the Valley can be mitigated by utilizing more sustainable agricultural methods. This study draws attention to the unsustainable agricultural practices that have disrupted archeology, culture, and environmental health in the Valley.

Presenting: Wednesday 4/16 1-5pm

Student: Haylee Shapiro
Faculty Sponsor: Wendy Lascell (Geography & Environmental Sustainability)

Evaluating the Sustainability Value of Farmers Markets in Central New York State ☼

Farmers markets are essential to supporting local agriculture and promoting environmental sustainability. However, the effectiveness of these markets varies significantly based on several factors related to management structure. This study evaluates farmers markets in Central New York using a 20-point scoring system, with each market assessed across four key criteria: accessibility, product diversity, sustainability initiatives, and number of vendors. Accessibility is considered in terms of transportation options, such as bus routes and bike racks, as well as pedestrian and wheelchair access. Product diversity is evaluated based on the range of items available, including fresh produce, dairy, meat, baked goods, preserved foods, handmade crafts, and specialty goods, with a focus on organic, ethnic, and locally sourced options. Sustainability efforts are scored based on vendor practices (such as organic farming, waste reduction, and pesticide-free cultivation), market-wide policies (like composting programs, reusable packaging initiatives, and SNAP acceptance), and other eco-friendly initiatives. The number of vendors is assessed to determine the market's scale and variety. One of the challenges of this research is that it must continue into the summer, as Oneonta's winter climate is not suitable for growing many crops, limiting the availability of fresh local produce during colder months. The hope for this project is that future Environmental Sustainability students will build upon it, conducting more in-depth evaluations of each market to fully understand their strengths and areas for improvement. Ultimately, this study aims to inform Oneonta community members about the variety of products available at local farmers markets, helping them make informed decisions about where to shop and what to expect when visiting.

Presenting: Wednesday 4/16 9am-1pm

Student: Caroline Shaver
Faculty Sponsors: Wendy Lascell, Jacob Warner (Geography & Environmental Sustainability)

EarthFest: Studying Environmental Impacts of a Small-Scale Event ☼

The music industry is booming in recent years, but what are the consequences? With record-breaking turnouts as concerts have resumed, impacts on the environment have become hot-button topics for sustainability-minded institutions, and attendees may not even be aware of the footprint they create by going to see their favorite band. Tons of garbage, carbon emissions from travel, light pollution, and habitat disruption are just a few of the affects created by large live events. By holding an event of my own, I hope to study these impacts on a small scale. Taking place at SUNY Oneonta's College Camp, the festival will reach students and faculty, along with the general Oneonta community. Water quality, sound pollution, vegetation, and animal activity will be investigated to assess the impact of the event. During the weeks before and after, monitoring will be conducted at College Camp three times a day to gather baseline data. During the event, hourly measurements will be recorded to assess the correlation between human activity and environmental conditions. A short-term environmental recovery period is expected, which will return to baseline by the end of the following week. The results of this research will serve as a guide for future sustainable events at SUNY Oneonta and inform my future work in concert sustainability.

Presenting: Wednesday 4/16 1-5pm

Students: Jessica Shaw, Brooke Findley
Faculty Sponsor: Antoine Blanc (Chemistry & Biochemistry)

Synthesis of Melicopteline Derivatives ★

In Asia, tea or traditional Chinese medicine granules of *Melicope pteleifolia* are prescribed for the treatment of various diseases or symptoms, including the flu. In late 2020, scientists identified the active ingredients against Influenza A Virus. They named the active principal ingredient (API) family: Melicopteline (1). Three of the five Melicoptelines (C, D and E) contain a constrained and oxidized tryptophan called HPIC. So far, chemists have accomplished the synthesis of only a few HPIC-containing cyclopeptides, due to the tedious extraction process from natural resources and challenging synthesis. Consequently, their medicinal properties are difficult to unravel, but scientists seek to develop a robust method to achieve their synthesis. Here we report the total solid phase synthesis of two unnatural Melicoptelines, each bearing an HPIC made from the oxidation of the non-proteinogenic d-Trp which were characterized by 1D and 2D-NMR (1H and 13C) spectroscopy, UV VIS spectrometry, low- and high-resolution LC-MS/DAD (in collaboration with SUNY Binghamton). Our innovative synthesis of Melicoptelines represents a good starting point in our chemical and biological exploration of HPIC-containing cyclopeptides. Moreover, this work lays down the foundation for an OBOC combinatorial HPIC peptide library to improve the Melicoptelines antiviral activity.1: Lee, B.W.; Ha, T.K.Q.; Park, E.J.; Cho, H.M.; Ryu, B.; Doan, T.P.; Lee, H.J.; Oh, W.K. *J. Org. Chem.* **2021**, 9, 1726-1735.2: Joonseok, J.; Jinwoo, L.; Seok Beom, L.; Seung Hyun, C.; Eun Jin, P.; Sang Jun, Y.; Joon Soo, A.; Dong-Chan, O.; Won Keun, O.; Suckchang, H. *Org. Lett.* **2022**, 24, 32, 6043–6048

Presenting: Wednesday, April 16 1-5pm

Student: Saranna Shevalier
Faculty Sponsor: Tracy Betsinger (Anthropology)

Getting to Know our Relatives ★ ☼

Part of Anthropology is the field of Primatology, which is the study of the behavior, biology, and evolution of nonhuman primates. Many people may not know that humans are also primates and that we share evolutionary relationships with lemurs, monkeys, and apes, as well as early human ancestors, or hominins. It is important to understand that the evolution of primate morphology did not happen in a straight line with humans as the intended outcome, but instead is the result of random

mutations occurring in various primates' genomes and natural selection acting on that variation. An exhibit has been developed in the Anthropology Gallery (Physical Sciences Building) that displays the similarities and differences among humans, human ancestors, and nonhuman primates, reflecting our evolutionary relationships. The new exhibit focuses on the face and hands, as these areas include features that are some of the most significant traits of primates. This includes forward-facing eyes, which create an overlapping field of vision, or stereoscopy, that aids in depth perception, climbing, and survival for primates. Another noteworthy feature is the opposable thumb and big toe, which enable the hands and feet to be grasping for holding on to branches and to manipulate small objects. Humans retain these traits, with the exception of grasping feet. Another goal of the exhibit is to communicate key conservation concerns of one of our closest living relatives, the bonobo (*Pan paniscus*). Bonobos are at risk of extinction and classified as "endangered" by the International Union for Conservation of Nature (IUCN). Museum exhibits can be an extremely useful tool in communicating scientific and educational information to the general public. The new exhibit provides information to visitors, which can spur meaningful thought and communication on topics related to our evolutionary history and to primate conservation.
Presenting: Wednesday 4/16 3-5pm

Students: Leah Smith, Matthew Zatz
Faculty Sponsor: Toke Knudsen (Math, Computer Science, Statistics)

Arthur Curtis Through Time

This presentation will be all about our research we found regarding Arthur Curtis. There is so much to know about him, both as a person and an educator. Arthur Curtis was born in Danbury on January 12th 1866 to Mr. and Mrs. E.L.B. Curtis. He graduated college with an architect degree. Arthur Curtis frequently flipped from being a teacher to a principal throughout his life. He was first a teacher at a boys school, then a principal at two high schools, then was made a teacher of mathematics in Oneonta Normal School. He taught for almost forty years and afterwards traveled to different continents. He later on taught at Sunday school and an institution in Chautauqua. Curtis believed that there were eleven principles of teaching that he said needed to be enforced by every teacher. Some of these were that the pupil should be the examiner of their own work, all written work should be performed on one sheet of paper and not copied, and pupils should form the habit of checking their own work. Arthur Curtis also wrote about different methods of computing interest. There was a general method for any rate and time, the six percent method, the formula method, and the use of interest tables. Additionally, he also wrote about percentages and how pupils can use them. He said that it allowed their work to be enriched and to give some serviceable work for the use of the teacher as a percentage based on preparation. Teaching percentages familiarizes students with the operations of percentage. This is done by giving students practice and drills working with divisions into one hundred equal parts.
Presenting: Wednesday 4/16 9am-1pm

Student: Nicholas Stein
Faculty Sponsor: Wesley Bernard (Art)

Voids in Humanity ★ ☼

Voids in Humanity is a film photography portfolio consisting of 30+ 6"x 6" gelatin prints created with both 35mm and 120mm film. This collection of manipulated photographs depicts human life, experiences, and emotions whilst featuring figures physically burned into the negative that both interact and conceptualize the setting within each photo. This portfolio is a cumulation of conceptual photographs that represent things that we experience as a species. The vague silhouette figures represent the human form as both a symbol and a personification of these experiences. That the body represents a memory, something that leaves an imprint behind; a void. The main objective of this project is to shine light on many situations in our current world that reflect this emptiness. For example, some prints depict poverty and homelessness, a void created by ourselves by actively ignoring and shaming these people who are just like us. The work also references grief, this

emptiness left by someone who we have lost, represented by these dark vague figures that hold a lost one's memory. Love and tenderness, a feeling we love, that also comes with a fear of loss, an empty husk without the one you love or loved. Happiness, is a fleeting, changing void, something that we forever remember, yet can never grasp the same again, there is always a void. We are a vessel and when we are gone there is a metaphoric void as well; a shell if you will that can be captured and shown in my technique.
Presenting: Wednesday, 4/16 9am-1pm

Student: Daniela Suarez
Faculty Sponsors: Maria Chaves-Daza, Roberto Rincon (Africana & Latinx Studies)

A Comparative Case Study of California and Staten Island Mixtecos
Mixteco communities in the United States face systemic challenges, including labor exploitation, language barriers, and discrimination. This research explores the success of grassroots organizations in California that have supported Mixtecos by addressing these issues, focusing on initiatives started and other labor advocacy groups. Using a comparative framework, this study applies lessons from California to the growing Mixteco population in Staten Island, New York, where similar challenges persist but organized support remains small. The research focuses on grassroots coalitions, the impact of specific cultural outreach, and the importance of providing legal aid and worker protections. By analyzing these existing models, it highlights transferable strategies for empowering Staten Island's Mixtecos, emphasizing the need for sustained community engagement, institutional partnerships, and community empowerment. The aim of this study is to act as a resource for these groups and push for a broader understanding of grassroots advocacy as a critical tool for addressing systemic inequality and fostering solidarity.
Presenting: Wednesday 4/16 1-4pm

Student: Samantha Teague
Faculty Sponsor: Yoko Takagi (Psychology)

Parental Discipline Styles: Cognitive and Affective Expressions and Child Reactions to Moral and Prudential Transgressions
Parental discipline plays a crucial role in shaping children's moral and social development (e.g., Hoffman, 1994; Kochanska, 1991, 1994; Racchia, et al., 2014). However, how parents handle children's moral (e.g., bullying, lying) and prudential (e.g., safety-related) transgressions, along with their emotional expressions during reprimands, can significantly influence children's behavioral and emotional responses. Past research suggests that parents use a combination of reasoning, punishment, and emotional communication (Hoffman & Saltzstein, 1967) when addressing transgressions, yet less is known about how these approaches differ based on the type of transgression and how children react. This study aims to examine (1) how parents disciplined children for moral versus prudential transgressions, (2) the kinds and the valence of emotions that parents expressed in these contexts, and (3) how children responded to these disciplinary actions. We predicted that parents would express more disappointment and mild anger in response to moral transgressions, signaling a violation of ethical norms, whereas they would express concern and fear emphasizing the potential danger involved in response to prudential transgressions. Parents of young children (aged 3-5) ($N = 37$) were recruited at three preschools and through community networks. They reported two distinct parent-child interactions: (1) a moral transgression, where the child engaged in a violation of moral norms (e.g., hitting others), and (2) a prudential transgression, where the child engaged in behavior that harmed themselves (e.g., playing with hazardous objects, engaging in dangerous actions). The participants reported their verbal and behavioral responses to the child's transgression as well as their emotional reactions, rating the valence of their expressions on a scale ranging from -3 to 3. The children's responses and emotional expressions were also recorded using the same scale. We devised the coding system (i.e., cognitive, affective, and behavioral aspects of parent-child interactions) based

on past research (Kochanska, 1994; Kochanska et al., 2002; Takagi & Saltzstein, 2010). Some selected findings include: 1) Contrary to past research across parents employed less *induction* (e.g., addressing the consequence of the child's action for others) discipline technique, 2) parental emotional expressions during disciplinary interactions tended to be different based on the type of transgression. Parents exhibited more intense negative facial expressions (e.g., fear, anger) in response to prudential transgressions compared to moral transgressions; 3) for prudential transgressions, the majority of children responded with visible embarrassment upon realizing the potential danger of their actions, often displaying behaviors such as lowering their heads, looking away, or displaying hesitant body language; and 4) for moral transgressions, children tended to express remorse by apologizing or showing some behavioral signs of guilt. However, a notable proportion of children exhibited oppositional reactions, such as kicking, screaming, or arguing, indicating variability in how children respond to discipline. The study provides valuable insights into how parents' emotional expressions during disciplinary interactions vary depending on the type of transgression and how children respond accordingly. Overall, it suggests that moral discipline may be more complex for young children to process, as it often involves abstract social norms rather than immediate consequences.
Presenting: Wednesday 4/16 3-5pm

Student: Emily Temple
Faculty Sponsor: Wendy Lascell (Geography & Environmental Sustainability)

Implementing Pollinator Gardens into Young Minds: Oneonta, NY ☼

Biodiversity and pollinators are essential for a sustainable future. Studies show that pollinator populations are decreasing globally. Educating younger generations about pollinators is crucial for building a sustainable future. The study area for this project is Oneonta, NY. It will focus on the educational outreach component of Dr. Lascell's broader project, "Creating Butterfly Gardens." The main objective of this study is to create educational materials for sixth graders to help mold stewards of pollinator species such as bees and butterflies; materials will emphasize pollinators' critical role in sustaining healthy ecosystems. Students will learn how easy it is to be stewards through creating mini-pollinator gardens of their own. This initiative promotes a deep understanding of ecology and conservation, motivating young students to become proactive environmental stewards and supporters of sustainable practices within their own neighborhoods. Pollinator gardens are essential for maintaining biodiversity, improving ecosystems, and achieving environmental sustainability.
Presenting: Wednesday 4/16 1-5pm

Students: Christine Tom, Emily Heman, Keelin Needham
Faculty Sponsor: Miranda Kearney (Biology)

Weathered Microplastic Pollution May Negatively Impact Plant Survival and Growth More Strongly Compared to Pristine Microplastics ☼

Intensive production and use of plastics has created a serious ecological problem due to their persistence in the environment as a nonbiodegradable pollutant. In nature, plastics are affected by forces which cause them to break into smaller pieces. Microplastics, pieces that are < 0.5mm in size, have been found in aquatic and terrestrial systems globally. There have been numerous studies on the effects of microplastics on the survival and growth of different plant species, but these focus on pristine microplastics. Our research investigates whether microplastics that have been subjected to natural environmental weathering conditions (e.g., heat and physical abrasion) differ in their impacts on plant survival and growth. In our pilot project, we investigated the effects of both pristine nylon and polyethylene microplastics and nylon and polyethylene microplastics weathered by physical abrasion and heating on *Lactuca sativa* (lettuce) germination, survival, and growth. Our preliminary results suggest that *L. sativa* growth may have been more negatively affected by the microplastics that were subjected to the two different weathering treatments (heat and physical abrasion) compared to

the pristine microplastics and the control. Our future research project will continue to investigate whether environmental weathering alters microplastic toxicity towards plants and aims to incorporate additional questions related to soil microbial activity as well as analysis of plastic leachates.
Presenting: Wednesday 4/16 1-5pm

Student: Emily Traufler
Faculty Sponsor: Wendy Lascell (Geography & Environmental Sustainability)

Promoting a Local Circular Economy: Otsego Reuse Center Case Study ☼
The circular economy is a system designed to minimize waste going into landfills by cycling products that might otherwise have been discarded back into the market. A key component of this system is reuse, which extends the lifespan of older products, promoting sustainable consumption. While large-scale circular economies have been widely studied (Delanoeije & Bachus, 2020; Fortuna & Diyamandoglu, 2017), there is limited research on their impact at the local level. This case study focuses on the Otsego Reuse Center (ORC), a nonprofit organization in Oneonta, NY, operated by The Arc Otsego. The study examines community financial savings through price comparisons of secondhand goods at the ORC to analog goods on the market. By categorizing donations based on price, condition, and demand, this research is expected to demonstrate that the ORC offers notable savings for community members. Additionally, findings may indicate that higher quality donations result in faster resale and greater savings, demonstrating the economic benefits of small-scale, closed-loop economy initiatives. This research is intended to show how ORC's operations support sustainability through access to affordable goods and overall environmental benefits for surrounding communities.
Presenting: Wednesday 4/16 9am-1pm

Student: Ruth Valenzuela
Faculty Sponsors: Maria Chaves-Daza, Roberto Rincon (Africana & Latinx Studies)

Latinos/as and African Americans in Northern Appalachia ★
This project attempts to map out the history and experience of African Americans and Latinos in northern Appalachia. The Appalachian region spans 205,000 square miles, extending from northern Mississippi to southern New York, spanning 13 states along the way. Appalachia has long been portrayed as a predominantly white, rural, and economically challenged area. However, this perception overlooks the region's growing racial and ethnic diversity. Northern Appalachia, which includes parts of New York, Pennsylvania, and Ohio, has undergone significant demographic shifts, particularly with the increasing presence of Latinx and African American communities. Historically, African Americans have been present in Appalachia since the era of slavery, contributing to its labor force and cultural landscape. The Great Migration and later economic downturns led many to leave, yet a significant number remained, shaping the region's history. The Latinx population, while historically smaller, saw explosive growth in the 1990s and 2000s, particularly in urbanized areas of Northern Appalachia. As Michael Dowdy highlights, this growing Latinx presence is redefining Appalachian identity, literature, and social dynamics. In Oneonta, New York, African American and Latinx populations have played crucial roles in shaping the city's economic and cultural fabric. Despite systemic challenges, community organizations have emerged to support minority-owned businesses, promote cultural integration, and advocate for economic equity. Drawing on regional development plans and scholarly analyses, this research explores how these communities have contributed to Oneonta's evolving identity. By examining historical patterns and present-day realities, this study challenges outdated narratives and highlights the resilience of Latinx and African American communities in Northern Appalachia, shedding light on their impact, struggles, and ongoing contributions to the region's transformation.
Presenting: Wednesday 4/16 11:30am-1pm

Student: Kayla Vanpelt-Cathcart
Faculty Sponsor: Ronald Bishop (Chemistry & Biochemistry)

Quantitation of Formaldehyde Released from Oxidized Triethylene Glycol Linked to Natural Gas Production ☼

The objectives of this project were to determine the dose-response relationship between formaldehyde and chromotropic acid and to study the oxidizing effects of air on triethylene glycol. Prior work indicated that when ammonium persulfate is used by the oil and gas industry to break the gel matrix used in hydraulic fracturing, the gas-phase reaction products react with triethylene glycol (used as a drying agent) to produce formaldehyde. This formaldehyde is then released into the air when the triethylene glycol is regenerated via boiling. The release of formaldehyde has yet to be quantified. A 1% solution of sodium chromotropate was prepared in concentrated sulfuric acid. This was added to various concentrations of aqueous formaldehyde, heated for 1 hour, then each sample's visible absorbance was measured. We constructed standard curves from multiple trials to determine the dose response of chromotropic acid to formaldehyde. From these results, the amount of formaldehyde found in oxidized triethylene glycol was calculated.

Presenting: Wednesday, 4/16 10am-1pm

Students: Albert Vargas, Jack Dyson, Emily McDougall
Faculty Sponsor: Katherine Griffes (Sport & Exercise Science)

Needs Assessment of Health and Physical Activity Programs for Older Adults in Rural Areas ★ ☼

Physical activity is a crucial factor in promoting health and quality of life in older adults. However, many older adults in rural areas face significant barriers to participation in physical activity programs. That includes accessibility, health limitations, social isolation, and lack of knowledge or motivation (McPhee et al., 2016). These barriers can lead to an increased risk of chronic health conditions, reduced physical function, and social isolation. That can further impact both physical and mental health (de Koning et al., 2020). Research suggests that tailored physical activity interventions, particularly those that foster social connections, can significantly improve both physical and mental health outcomes in older adult populations (Izquierdo et al., 2021). The purpose of this study is to develop and implement a needs assessment to better understand the barriers, motivators, and preferences related to physical activity participation in older adults in the rural Oneonta community. The study aims to identify common barriers to participation, preferred types of physical activity programs, and the role of social connections in promoting physical activity. Data was collected through a combination of self-reported surveys and brief interviews, assessing physical activity habits, perceived barriers, motivators, and preferred program formats. This study will provide valuable information for developing inclusive, accessible physical activity programs that promote health, social connections, and overall well-being in older adult populations.

Presenting: Wednesday, 4/16 9-11:30am

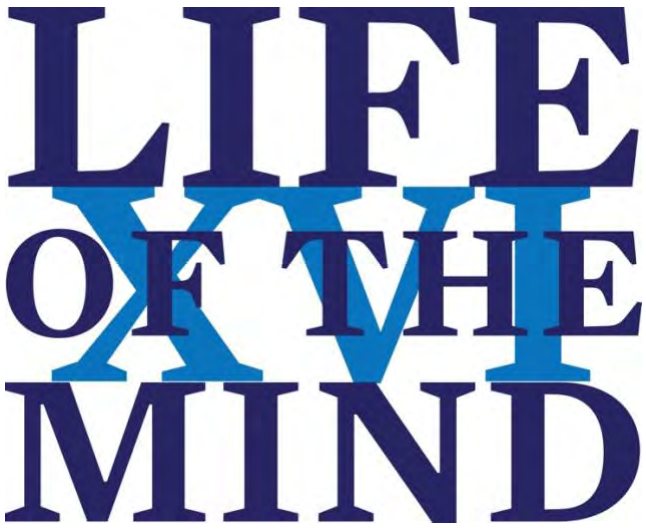
Students: Averi Hemming, Shana Belfast, Mya Cordy, Rocio Alas, Lauren Russo, Madison Flora, Rose Castronovo, William Humphrey, Emma Ghidini, Kendall Parker
Faculty Sponsor: James Zians (Psychology)

Preliminary Results from the Community Concerns Survey and Other Service-Learning Efforts of the Spring 2025 Community Psychology Class

Funding of the *Compass & Linkages Project* by the Community Foundation of Otsego County, has allowed the Psychology Department to expand experiential learning opportunities for our students. Efforts of this grant include a set of new community efforts that link SUNY Oneonta students with participating agencies for collaborative projects via service learning and student research projects nested in local health/social service agencies that focus on community challenges. The "*compass*" portion of the project involves data collection, small targeted needs assessments and community-level research, such as the Community Concerns Survey presented in this poster. The "*linkages*" portion of

the project involves collaborative efforts between faculty, students and staff at the local agencies. Some of these student-led efforts include development of toolbox-style of curriculum manuals for student-peer coaching and program evaluation efforts at some local community agencies. Additionally, the plan is to form a "collaborative consultant group" focused on improved client services and solutions to local problems. Preliminary results from the Community Concerns Survey presented in this poster, assessed the attitudes, beliefs and concerns of local residents regarding homelessness, vagrancy, risks related to alcohol abuse, illegal drug abuse, community violence, vandalism, and mental illness. This study entailed a brief questionnaire completed by adults (age 18 and older), who reside in Oneonta or live within 30 miles of Oneonta and travel to Oneonta regularly for purpose of work, school, commerce /shopping or socialization. Preliminary results of this study demonstrate attitudes, beliefs and behaviors related to community concerns related to perceived risks and worries about safety. Overall, the *Compass & Linkages* grant provided many benefits to our community, beginning with capacity building for participating local agencies. This growth resulted in client service efficiency and improvement. These efforts that link the university with local agencies also provide a technology transfer of expertise, between faculty and agency staff. Fortunately, via FMA funding from SUNY Oneonta, *The Compass & Linkages Project* will be sustained during the next three years. Building on an already successful Psychology Internship Program, the Psychology Department plans to integrate the "*compass*" and "*linkages*" efforts into an *Experiential Learning HUB*.

Presenting: Wednesday 4/16 9am-5pm



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https://suny.oneonta.edu/scholarly-activities/student-research-creative-activity-showcase

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