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Augustana
celebration
of learning
17

Augustana College

8:15-9:30	HONORS & AWARDS BREAKFAST WALLENBERG HALL, DENKMANN												
9:30-10:45	POSTER SESSION I (WITH BREAKFAST SNACKS), The Gerber Center, Gävle Room: Biochemistry, Chemistry, Biology, Environmental Studies, Geography, Geology, Applied Mathematics, Physics, Photo Bureau and Study Away Photo Contest												
11-11:45	POSTER SESSION II, The Gerber Center, Gävle Room–Sustainable Working Landscapes Initiative												
	Featured Presentations: Olin Auditorium	Session Room A: Hanson 102	Session Room B: Hanson 304	Session Room C: Hanson 305	Session Room D: Olin 305	Session Room E: Old Main 135	Session Room F: Old Main 21 & 28	Session Room G: Evald Hall 17 & 18	Session Room H: Bergendoff, Larson Hall	Session Room I: Augustana Teaching Museum of Art	Session Room J: Honkamp Black Box Theatre	Session Room K: Brunner Theatre Center, Wilson Center	Session Room L: Library, 2nd Floor, North
SESSION-I 10:30-11:30	FEATURED I: ALUMNI PRESENTATION	MJMC, Psychology, Public Health		Chemistry	Mathematics				Business	Senior Art Show	Women and Gender Studies		History: Lost Museum
SESSION-II 11:45-12:45	FEATURED II: STUDENT PRESENTATION	Theatre	Texas Medical Center-SCRIP	Chemistry, Physics	Mathematics	Philosophy	Masculinity Museum		Business, Writing	Senior Art Show	Art History, Theatre		Geifman Awards
SESSION-III 1-2	FEATURED III: FACULTY PRESENTATION	FACULTY PRESENTATIONS: Chemistry, MJMC, Geography, History	Texas Medical Center-SCRIP	Physics, Engineering	Mathematics	Classics		Anthropology, Service		Senior Art Show	Communication Studies, Performance	French	Creative Writing (Rain Site)
SESSION-IV 2:15-3:15		Biology, Health	Hasselmo, Honors			Religion, History		Gender, Political Science			FEATURED-IV: Student-Faculty Presentation	French	
3:15-4:30	POSTER SESSION III (WITH SNACKS): The Gerber Center, Gävle Room–Public Health, Education, History, Business Administration, Computer Science, Women and Gender Studies, Communication Sciences and Disorders, Biology, Communication Studies, Geography, Neuroscience, Psychology, Texas Medical Center-SCRIP												
Session-V 7-8:30												Only I: Performance and Discussion	

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CELEBRATION OF LEARNING 2017 OVERVIEW

POSTER SESSION I

9:30–10:45 a.m. | The Gerber Center, Gävle Room

POSTER SESSION II (SWLI)

11–11:45 a.m. | The Gerber Center, Gävle Room

POSTER SESSION III

3:15–4:30 p.m. | The Gerber Center, Gävle Room

SENIOR ART SHOW GALLERY TALKS

Senior Art Show Gallery Talks (Group 1)

10:30–11:30 a.m. | Augustana Teaching Museum of Art (Centennial Hall)

Senior Art Show Gallery Talks (Group 2)

11:45 a.m.–12:45 p.m. | Augustana Teaching Museum of Art (Centennial Hall)

Senior Art Show Gallery Talks (Group 3)

1–2 p.m. | Augustana Teaching Museum of Art (Centennial Hall)

FEATURED & CONCURRENT PRESENTATIONS, SESSION I [10:30–11:30 a.m.], II [11:45 a.m.–12:45 p.m.], III [1–2 p.m.], IV [2:15–3:15 p.m.]

Olin Auditorium (Featured Presentations I, II, III), Hanson 102, Hanson 304, Hanson 305, Olin 305, Old Main 132, Old Main 21 & 28, Evald 17 & 18, Larson Hall, Augustana Teaching Museum of Art, Honkamp Myhre Black Box, Wilson Center, Library, 2nd (Main) Floor, and outside (on the Quad; near the Gazebo)

FEATURED ALUMNI PRESENTATION I

10:30 a.m. | Olin Auditorium

Ken Clay '14, Stuart Casarotto '14, Mark Hoffman '15

"So I've got this idea..."

FEATURED STUDENT PRESENTATION II

11:45 a.m. | Olin Auditorium

Sara Diemer, Ali Kerr, Samantha Pacha, various Viking Pups handlers

Viking Pups: Pups, People, and Passion

FEATURED FACULTY PRESENTATION III

1 p.m. | Olin Auditorium

Dr. Paul Olsen, English and Africana studies

Racial stereotypes: history and consequences

FEATURED STUDENT-FACULTY COLLABORATION PRESENTATION IV

2:15 p.m. | Brunner Theatre Center, Honkamp Myhre Black Box

Dr. Pat Shea, Shannon Smith, Haylee Walker, Devyn Absher, Madison Stoneman

Reflective Practitioner Senior Inquiry

SESSION V

7 p.m. | Brunner Theatre Center, Honkamp Myhre Black Box

Keila Saucedo

"Only I" Presentation and Discussion

SPECIAL PROJECTS

Tuesday, May 2, 7–8:30 p.m. | Hanson 102

Augustana Invitational Robotics Challenge 2017

Wednesday, May 3, 10 a.m.–3 p.m. | The Gerber Center (4th floor hallway)

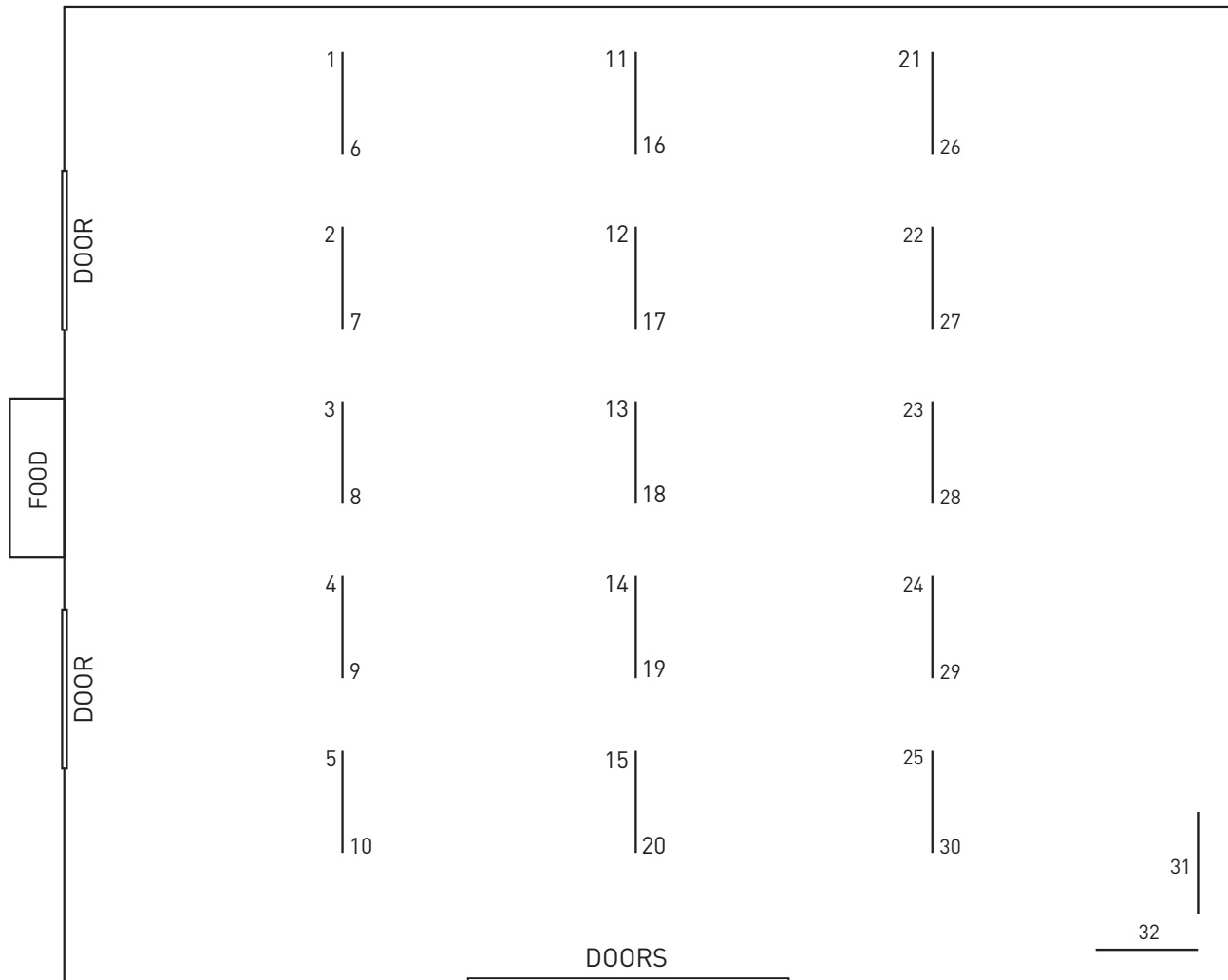
Project SAVE

Wednesday, May 3, 10:30 a.m.–3:15 p.m. | Outdoors (1) by clock outside Hanson, (2) Unity Pole outside Old Main, (3) steps to The Gerber Center

Cookie Conversations (Sustained Dialogue)

POSTER SESSION 1 | 9:30-10:45 a.m.

Poster Presentation Layout | The Gerber Center, Gävle Room



- | | |
|---|---|
| 1 Adam Lydigsen-Grimes, Luther Grulke, Alexander Bergstrom, Tara Groen, Elaina Analitis, Patrick Crawford | 17 Jacob Piske |
| 2 Valeria Melo, Dr. José Boquín, Josh Coduto | 18 Jessa Rizzo |
| 3 Christina Sauer | 19 John Malone |
| 4 Daniel Herrera | 20 Robert Martin |
| 5 McKenna Burns, Dan Herrera, Dr. Tierney Brosius, Dr. Tim Muir | 21 Mark Lundine |
| 6 Victoria Lason, Jessamine Finch | 22 Allison Pease |
| 7 Skylar Monahan, Morgan Anderson, Ryan Johnson | 23 Zachary Cook |
| 8 Allison Furr, Dr. Kevin Geedey | 24 Sierra Kindley, Dr. Jeffrey Strasser, Dr. Michael Reisner, Dr. C. Kevin Geedey |
| 9 Axl Eriksson, Dr. Gregory Domski | 25 Joseph Teresi |
| 10 Isaac Smith | 26 Michael Carlson, Dr. Cecilia Vogel |
| 11 Sara Baugh | 27 Peter Francissen, Dr. C. Kevin Geedey, Dr. Michael Reisner |
| 12 Barrie Chileen | 28 Matthew Tuttle-Timm |
| 13 Erienne Davis | 29 Luke Robinson |
| 14 Erin Runde | 30 Marlisa Barrett |
| 15 Courtney Chouinard | 31 Amanda Moore |
| 16 Diney Osman | 32 Emma Stough |

POSTER SESSION 1

GÄVLE ROOM, THE GERBER CENTER

9:30-10:45 a.m.

Breakfast foods and beverages will be served during the morning poster session.

Adam Lydigsen-Grimes, Luther Grulke, Alexander Bergstrom, Tara Groen, Elaina Analitis, Dr. Patrick Crawford

Project advisor: Dr. Patrick Crawford, biochemistry

Isolation, Expression, and Characterization of a β -lactamase Produced by *Meiothermus ruber*

Poster Session [P1] #1: Gävle Room, The Gerber Center

β -lactamase enzymes are the most significant contributor to antibiotic resistance in bacteria. The pharmaceutical industry's response to antibiotic resistance has been to develop new antibiotics or β -lactamase inhibitors; these successes in the clinical setting require an understanding of the structure and function of the β -lactamases. A β -lactamase gene was identified in *Meiothermus ruber*, a thermophilic gram-negative bacterium, with a bright red carotenoid pigment. *M. ruber* genomic DNA was utilized to clone the β -lactamase gene into the plasmid pKT1. The pKT1 plasmid contains a β -lactamase selection gene, which could potentially obfuscate kinetic assay data. Therefore, the β -lactamase gene from *M. ruber* was then amplified by PCR, inserted into pET-26b (a protein-expression vector containing a Kanamycin resistance selection gene) and transformed into *E. coli*. Restriction digestion and sequencing were performed on the successful transformants to verify the presence and correct orientation of the *M. ruber* β -lactamase gene. Activity and substrate preference of the gene product was determined by growing the bacteria in the presence of various β -lactam antibiotics. Preliminary tests suggest the *M. ruber* β -lactamase gene product can hydrolyze cephalosporin β -lactam antibiotics but not carbapenems. This result is supported by sequence comparison studies that suggest the gene product is a class C (AmpC-type) β -lactamase. Further experiments are required to understand the structure and function of the β -lactamase from *M. ruber*.

Valeria Melo, Dr. José Boquín, Josh Coduto

Project advisor: Dr. José Boquín, chemistry

Optimization of the Sonogashira Reaction for the Synthesis of AC1 Derivatives

Poster Session [P1] #2: Gävle Room, The Gerber Center
Previous studies in the research lab of Dr. José Boquín at Augustana College have addressed TLR activation and have resulted in the synthesis of a small organic agonist (AC1) capable of activating a specific type of toll-like receptor, TLR7, that is found in humans. Preliminary biological results have identified AC1 as a potent TLR7 agonist. The activation of TLR7 by AC1 could potentially produce natural cytokines for the stimulation of an adaptive immune response. With the importance of this larger application in mind, this branch-off study focused on the optimization of AC1 synthesis via the Sonogashira coupling of an aryl halide with a terminal alkyne. Variables such as type of solvent used, amount of solvent used, type of reagents used, concentration of reagents, inert conditions and reaction time were modified. Seven variations of Sonogashira reactions were performed in which we identified THF as the ideal solvent for a tosylated AC1. The most successful Sonogashira reactions were reactions SC4-SC6, which increased reagent/catalyst concentration while decreasing the amount of solvent used.

We also found that allowing the aryl halide and catalysts to stir for 30 minutes before the addition of the terminal alkyne and allowing the reaction to stir overnight afforded the best results. A nitrogen atmosphere was determined not necessary for the Sonogashira coupling reaction with the compounds of interest. These findings are steps forward for the optimization of the Sonogashira coupling reaction. It will be important, however, to look for ways to increase percent yield to above 50%, as well as explore new synthetic routes to tosylate AC1. The tosylation of AC1 will be imperative for controlling the functionality and biological activity of AC1 in future studies.

Christina Sauer

Project advisor: Dr. C. Kevin Geedey, biology

Microspora Competition for Sunlight

Poster Session [P1] #3: Gävle Room, The Gerber Center

The focus of this project was to study the primary production of the filamentous green algae *Microspora* and its potential to inhibit its own photosynthesis as well as the potential for rooted aquatic plants to inhibit its photosynthesis. The spatial distribution of *Microspora* could be explained by this competition between organisms. To test this, I set up buoys in areas of rooted aquatic plants, *Microspora* mats and direct sunlight. The buoys held Biological Oxygen Demand bottles in which *Microspora* was held in-situ for net primary production measurements. Net primary production was defined as the difference between the final and the initial oxygen concentration in each bottle, and then expressed as a rate by dividing by the bottle volume and incubation time. The results showed statistically significant differences in net primary production of *Microspora* under mats of itself and beds of *Potamogeton crispus*. Net primary production was negative in both habitats, suggesting that *Microspora* net primary production is inhibited in both locations. Furthermore, the statistically significant results indicate that microhabitats within the pond favor different species.

Daniel Herrera

Project advisor: Stephanie Fuhr, biology

Foraging Efficiency and Learning in Capuchin Monkeys (*Cebus capucinus*)

Poster Session [P1] #4: Gävle Room, The Gerber Center

Primates have relatively large brain-to-body ratios and spend a substantial period of their life in the juvenile development stage. Large brains suggest long juvenile stage, hypothesizing that primates require long juvenile periods to learn complicated foraging techniques. Critics of this hypothesis argue that foraging efficiency increases primarily as a function of increased muscle mass, not learning. We set out to determine if the juvenile period is in fact used to learn complicated foraging techniques by examining food preferencing behavior in white faced capuchin monkeys (*Cebus capucinus*). Individuals of varying ages were observed as they selected fruits from *Attalea palm trees (Attalea butyracea)*. Learning was tested by counting the number of times each individual touched, bit or dropped individual fruits before eating them. We found that individuals tested fruits less as they aged, indicating that individuals learned how to distinguish a desirable fruit from a non-desirable fruit over time. These results support the previously stated hypothesis and justify the long juvenile period in primates, offering insight to the evolutionary drivers of primate ecology.

McKenna Burns, Dan Herrera, Dr. Tierney Brosius, Dr. Tim Muir

Project advisor: Dr. Tim Muir, biology

Cold-Hardiness in North American Tiger Beetles

Poster Session [P1] #5: Gävle Room, The Gerber Center

Insects in temperate or polar climates must display behaviors or physiological mechanisms to cope with low winter temperatures. Tiger beetles (*Cicindelinae*) range throughout North America, and although their ecological role as insect predators has been heavily studied, almost nothing is known about their winter cold tolerance. For this reason, we measured three key indicators of cold tolerance—chill tolerance, freeze tolerance and supercooling points—of adult *Cicindela repanda* and *Cicindela limbalis* during acclimation to winter. We also measured whole-body glycerol content and hemolymph osmolality. Our preliminary results suggest that both species are chill tolerant, but that they are not freeze tolerant. Significant lowering of the SCP was evident for *C. repanda*, with a median SCP of -9.0°C dropping to -11.2°C . Both species did accumulate modest glycerol; mean glycerol concentrations of *C. repanda* and *C. limbalis* were measured at $0.9\ \mu\text{mol/g}$ and $1.5\ \mu\text{mol/g}$ in early fall and $1.0\ \mu\text{mol/g}$ and $1.4\ \mu\text{mol/g}$ by mid-January, respectively. This initial assessment of winter cold tolerance suggests that adult tiger beetles can survive low temperature in the absence of internal ice formation and that the capacity of *C. repanda* to remain unfrozen increases in winter. The modest increase in glycerol content found in both species is too little for colligative cryoprotection, but it may protect the beetles from low-temperature injury in other ways. Further investigation is needed to better understand the overwintering microhabitat of the beetles and how it may affect winter mortality.

Victoria Lason, Jessamine Finch

Project advisor: Jessamine Finch, Northwestern University

Defining the Germination Tolerance Range of Three Milkweeds (*Asclepias* spp.)

Poster Session [P1] #6: Gävle Room, The Gerber Center

Our changing climate is growing as a major variable in plant science as it poses a marked impact upon early life stages of plants, including germination and seedling establishment. Both stages have recently been identified as a large potential bottleneck to plant recruitment under climate change, as seedlings will be more sensitive than mature individuals. As an important source of nectar for pollinators, and the obligate host plant for monarch butterflies, three species of milkweed were chosen to forecast species responses to variables, including heightened temperatures. Seeds from nine populations of each species were collected along a latitudinal gradient. Lab-based germination trials occurred in two light- and temperature-controlled incubators for a period of 32 days at $25/15^{\circ}\text{F}$, and for 36 days at $15/5^{\circ}$. After the incubation trials, viability tests were conducted upon non-germinated samples to check for dead or dormant seeds. Our results identified significant differences in milkweed germination among species, populations and regions, in response to simulated winter length and spring temperature changes throughout the Midwest of the United States. These findings have the potential to inform best practices in seed sourcing for restoration. Implementing optimal milkweed ecotypes decreases management time and cost—two major limiting factors in restoration.

Skylar Monahan, Morgan Anderson, Ryan Johnson

Project advisor: Dr. C. Kevin Geedey, biology and environmental studies

The Effects of Urbanization on Leaf Breakdown Rates in a Rock Island Watershed

Poster Session [P1] #7: Gävle Room, The Gerber Center

The ability of streams to break down leaves is widely used as an indicator of a stream's functional health. In typical assessments of stream health, structural factors such as pH, nutrients, turbidity, toxic chemicals, etc., are used to judge a stream's health but functional indicators take into account the ability of streams to fulfil ecosystem services. In this study, we use leaf decomposition rates to assess the functional health of streams in an urban watershed in Rock Island, Ill. A previous study measured decomposition rates at six sites that were categorized by chloride levels. The current study assesses decomposition more broadly among 12 sites. The sites were characterized by similar levels of discharge, stream order, temperature and pH. Sugar maple (*Acer saccharum*) and red oak (*Quercus rubra*) leaves were collected shortly after abscission and were then weighed, packaged in mesh bags (5g per bag), and deployed in situ for periods of two and four weeks. Mesh bags were then removed, dried and weighed so mass loss and leaf decomposition rate could be calculated. Preliminary findings suggest that decomposition rate at the fastest decomposing site was roughly three times that of the lowest site. At two weeks, decomposition rates vary significantly across the watershed (ANOVA, $p < 0.001$). Our previous findings suggested that differences in leaf decomposition rates were likely caused by lower levels of macroinvertebrate diversity associated with high chloride levels from urban stormwater runoff. In this study, we intend to correlate rates of decomposition to water quality parameters, including chloride, family biotic index, pH, nutrient levels and total suspended solids, as well as other watershed characteristics, including upstream land use and the amount of near-stream impervious surfaces, to examine if these patterns hold across the watershed.

Allison Furr, Dr. C. Kevin Geedey

Project advisor: Dr. C. Kevin Geedey, biology

Deer Droppings as a Diverse Invertebrate Habitat

Poster Session [P1] #8: Gävle Room, The Gerber Center

Performed at Augustana's Green Wing Environmental Laboratory, this project studied the richness and diversity of soil invertebrates in two conditions—deer poop-enriched soil and surrounding soil. Soil invertebrates play an important role in soil quality which greatly affects ecosystems. The hypothesis of this study was that the diversity and richness would be higher in the poop-enriched soil samples. Soil samples were collected, Burlese funnels were used to collect the invertebrates, the invertebrates were examined under the microscope and were assigned to taxa. The number of taxa (richness) and the number of individuals in each taxa (Simpson's diversity) were used to compare the two soil conditions of deer poop-enriched soil and surrounding soil.

Axl Eriksson, Dr. Gregory Domski

Project advisor: Dr. Gregory Domski, chemistry

Synthesis of Novel Chiral Pyridine-functionalized Imidazolium Salt: Proligand for Asymmetric Catalysis

Poster Session [P1] #9: Gävle Room, The Gerber Center

This research is about how to synthesize an organic compound using the techniques used by the researchers behind the articles "Acid-Catalyzed ortho-alkylation of Anilines," "Dicationic chelating N-heterocyclic carbene complexes of Palladium," and "A Modified

Procedure for the Synthesis of 1-Arylimidazoles and Palladium Complexes with Tridentate Pincer Bis-Carbene Ligands as Efficient Catalyst for C-C Coupling." The series of reactions start with 1-tert-butyl-4-ethenylbenzene reacting with 2,4-dimethylaniline to form 2-[1-[4-tert-butylphenyl]ethyl]-4,6-dimethylaniline. This compound then reacts with 1-imidazole to form 1-[2,4-dimethyl-6-[1-[3-tert-butylphenyl]ethyl]phenyl]-1H-imidazole. React this with pyridine to form the final product. The lab part of this research is not yet complete, but two of the three reactions have been performed, and each product has been identified with HNMR. The most difficult reaction to perform was the one used in "Dicationic chelating N-heterocyclic carbene complexes of Palladium" (reaction 2) so the technique that was used in that research was replaced by a technique used in "A Modified Procedure for the Synthesis of 1-Arylimidazoles."

Isaac Smith

Project advisors: Dr. Gregory Domski and Dr. Patrick Crawford, chemistry

Introduction to Zymurgy: Variations in Brewing

Poster Session [P1] #10: Gävle Room, The Gerber Center

During the term, we have prepared five variations on an American Pale Ale recipe in order to study the impact of different dextrose contents on percent alcohol by volume, taste and consistency of the beer—as found through analytical methods and a tasting panel.

Sara Baugh

Project advisor: Dr. Jennifer Burnham, environmental studies and geography

Summer Precipitation Occurrence Effect on Two Passerine Species in Thule, Greenland

Poster Session [P1] #11: Gävle Room, The Gerber Center

Climate change is occurring at a faster rate in the Arctic than the rest of the globe, causing temperature rises at twice the rate of the global average and increased summer precipitation in the form of rain. These precipitation events are predicted to affect migratory bird species that breed throughout the Arctic. Increased occurrence of heavy rainstorms indirectly affect bird populations by impacting distribution and abundance of food supply, and directly affect bird populations by increasing mortality rates of juveniles. Studies conducted on bird species throughout the Low Arctic regions have shown that it is not the total precipitation of a breeding season that results in juvenile bird mortality, but the occurrence of severe storms that result in significant precipitation in single weather events. To test for similar results in the High Arctic region, juvenile survival rates of snow buntings (*Plectrophenax nivalis*) and Lapland longspurs (*Calcarius lapponicus*) were recorded for the months of June through August between 2010 and 2016 in Thule, Greenland (76° N, 68° W). This was done using Potter traps and attaching numbered leg bands for identification. Results showed that heavy rain events, defined as being over seven millimeters, which occurred in June during the nest building/egg laying time frame and in July when nests were vulnerable, had lower rates of juvenile passerine species observation. The results were not as direct and significant as prior studies but still showed an overall negative impact of precipitation on passerine species in the High Arctic.

Barrie Chileen

Project advisors: Dr. Reuben Heine and Dr. Thomas Albright, environmental studies and geography

An Evaluation of Gridded Temperature Products and their Effectiveness in Modeling Small Scale Ambient Temperature

Poster Session [P1] #12: Gävle Room, The Gerber Center

The use of gridded temperature products is becoming increasingly prevalent in ecological research due to their accessibility, low cost, and spatial and temporal coverage. While a few studies have compared gridded products with each other and with weather station data, little research exists that attempts to verify the accuracy of these gridded products on finer spatial scales in field settings. In this study, we use two networks of temperature sensors to evaluate the effectiveness of these widely used gridded products in modeling ambient temperatures and compare tradeoffs between spatial and temporal resolution of gridded products. We deployed 65 temperature sensors in radiation shields (Holden 2013) at the Kofa wildlife refuge in Southwestern Arizona and 80 sensors on the Snake Range of Eastern Nevada. From 2014 to 2015, the sensors recorded hourly temperatures. We then compared the sensor-collected temperatures against three widely used gridded temperature products that have varying spatial and temporal resolutions: NLDAS 10 km at hourly intervals, PRISM 4 km at daily intervals and Daymet 1 km at daily intervals. To compare the daily products, it was necessary to interpolate hourly values from daily minima and maxima. To do this, two methods of hourly interpolation (a cosine fit with variable sunrise and the Chillr package in R) were compared against sensor readings. We find that gridded products provide strong overall fits with sampled datasets but have a tendency to underestimate maxima and overestimate minima. Studies involving processes that are sensitive extremes and threshold based indices may be negatively affected by these biases. Of the gridded products used, Daymet was the most accurate at capturing Tmax and hourly temperatures (average R2 > 0.90), while NLDAS was the least accurate (R2 = 0.70). While this suggests that the benefits of finer spatial resolution may outweigh the benefits of finer temporal resolution, other factors unrelated to resolution, such as topographic homogeneity across pixels, may have contributed to the differences among products.

Erienne Davis

Project advisor: Dr. Reuben Heine, geography and environmental studies

Mississippi River Floodplain Sedimentation: Distribution and Change in Pool 18

Poster Session [P1] #13: Gävle Room, The Gerber Center

Overbank deposition and sedimentation have been identified as key processes for fluvial geomorphology and river sediment budgets. In the UMR valley, islands and floodplain surfaces have been shown to be aggrading by about 5mm/yr but little is known about: (1) the spatial distribution of the sedimentation, (2) factors that influence sedimentation distribution or (3) the impact that these sediments have on floodplain habitats and forest conditions. This study utilizes large-scale historic (1937) and modern (2011) topographic data to map and explain sedimentation patterns in a 1.4-km long reach of the Mississippi River in Pool 18. Sedimentation was modeled across the study area using the DEM of difference (DoD) method which mathematically compares gridded elevation to compute changes in elevation over time. For the Pool 18 study area, we compared: (1) historic topographic data based on 1937 Plane Table Maps with (2) modern elevation data from 2011 LiDAR to create a sedimentation depth map. Using the DoD surface and other spatial data, this

study: (1) maps and describes the spatial patterns of sedimentation between 1937 and 2011 and (2) tests for correlations between the depth of deposition with other hydrodynamic variables found in the literature. The DoD surface reveals a heterogeneous and complex spatial pattern of sedimentation with some areas accumulating as much as 4.1 meters of sediment in the 74 years [55.4 mm/year]. Overall, the island and low floodplain surfaces increased in elevation by 0.92 meters (12.4 mm/year). A visual assessment of the sedimentation patterns shows that highest levels of sedimentation have taken place along stable, non-eroding shorelines while lower rates are found in locations farther from active channels. The highest rates of sedimentation were found in areas with wing dams [engineered, channel-training structures]. In these areas, new natural levees have replaced low sandbar surfaces, resulting in the high sedimentation depths. The interior areas of Huron Island received the lowest amounts of sediment accumulating ~0.3 meters of sediment in 74 years [4.1 mm/year]. This study also tested for spatial correlations between sedimentation depth and potential explanatory variables, including: (1) distance to active channel and (2) relative elevations in 1937 and 2011. A significant negative coefficient was detected between "sedimentation depth" and "distance to channel" while the "1937 elevation" also yielded a significant and negative correlation coefficient. These findings are in broad agreement with previous studies and have implications for UMR sediment budgeting, habitat assessments and forest management.

Erin Runde

Project advisor: Dr. Christopher Strunk, geography

Lost City of Kilbourn: An Evolution of Tourism in Wisconsin Dells, WI

Poster Session [P1] #14: Gävle Room, The Gerber Center

Once a small town perched at the Dells of the Wisconsin River, Kilbourn City transformed itself from a small logging community into a tourist destination known worldwide as Wisconsin Dells. For more than 70 years, tourism in the Dells focused on the natural beauty of the Wisconsin River with its pine forest and sandstone formations. As trends in tourism changed, planners rushed to keep visitors coming and repackaged itself into the "Waterpark Capitol of the World," where glimpses of the recreational water of the Wisconsin River is seen only in glimpses. Sanborn maps, photographs and advertisements have created a dialogue of development and change of the downtown's tourist center for more than five generations. Using these primary sources, I focus on how has the sense of place adapted to what it is today and where is it going in the future.

Courtney Chouinard

Project advisors: Dr. Jeffrey Strasser and Dr. Michael Wolf, geology

Elemental Contamination of an Ancient Copper Mine in Killarney National Park, Killarney, Ireland

Poster Session [P1] #15: Gävle Room, The Gerber Center

Ross Island Copper Mine, located in Killarney National Park, Killarney, Ireland, is known for archeological artifacts of copper from the Bronze Age. Copper production surged in the late 1700s and into the mid-1800s. Copper veins were found in the Mississippian-aged limestone bedrock, along with chalcopyrite and tennantite ore. Eventually, mine shafts were filled in, waste piles were moved or disposed of, and trees were planted. Little remediation has been done since the original work in 1912. The purpose of this study is to investigate the levels of contamination in the soil and water in and around mine sites. Twelve water samples and four soil samples were studied. The water samples were analyzed in an XRF

spectrometer for S and Cu. Soil samples, mostly of a sand or silt texture, were pressed into pellets for XRF analyses of S, Pb, Cu and Zn. Water samples had low concentrations of both Cu and S (ppm, respectively). Much higher concentrations of S and heavy metals were observed in soil samples, with maximum concentrations of S >134,000 ppm, Zn >63,000 ppm, Pb >62,000 ppm and Cu >17,000 ppm. These high levels may be of concern, although leaching of these metals will probably not adversely affect local aquifers or wells because of dilution in nearby Lough Leane. There is no immediate threat to humans from contaminated soil, though the health of some plant species could be compromised, especially with high levels of Pb and Zn.

Diney Osman

Project advisor: Dr. Lena R. Hann, public health

Approaches To Case File Management at World Relief, a Resettlement Agency for Vulnerable Populations

Poster Session [P1] #16: Gävle Room, The Gerber Center

The purpose of this Senior Inquiry project was to provide a formal recommendation for case file management at World Relief in Moline, Ill. Case file management systems help agencies organize and retrieve their records quickly in order to focus on unique client needs. World Relief works mostly with refugees who have fled their home countries because of fear of persecution. Many of these individuals have experienced trauma and have mental problems as a result. The agency needs to make sure that every client receives the appropriate treatment. This project helped the agency keep client files organized and provided clear procedures for staff to follow. This project examined similar organizations' methods of filing to inform the new evidence-based system for World Relief. This will help the resettlement agency keep better track of its case files and provide more efficient and impactful service to clients.

Jacob Piske

Project advisor: Dr. Jeffrey Strasser, geology

Nutrient Variations of Six Surface Water Bodies in McHenry County, IL

Poster Session [P1] #17: Gävle Room, The Gerber Center

This research analyzes water quality from several ponds in McHenry County, Ill., with a goal of developing an understanding of pollution sources and temporal variations in concentrations of nitrate, potassium, phosphorus, chlorine and sodium. During the past 25 years, the population of McHenry County has grown rapidly, with residential developments expanding into former farmlands. Yet, the county remains heavily agricultural, with roughly 60% of the surface area used for agricultural purposes. Concentrations of NO₃⁻, P⁺, K⁺, Cl⁻ and Na⁺ were analyzed from six sites: two in subdivisions, two in farmland and two near major highways. Data were collected once a week from June through July, and twice during November 2016. Data were collected using two methods: the first method involved a color change test to test for NO₃⁻ and Cl⁻ using 5 mL samples. The second method tested for dissolved Na⁺, K⁺ and P⁺ by pipetting water samples onto filter papers that were subsequently dried and analyzed using XRF spectroscopy. High concentrations of NO₃⁻ and Cl⁻ were 13.2 ppm and 0.4 ppm, respectively, with EPA limits of 10 ppm and 250 ppm, respectively. High concentrations of Na⁺, P⁺ and K⁺ were 215 ppm, 181 ppm and 345 ppm of K⁺, respectively, with EPA limits of 20 ppm for Na⁺, 0.05 ppm for P⁺ and no limit for K⁺. With NO₃⁻, Na⁺ and P⁺ being over the EPA limit during the testing period, there is cause for concern for downstream pollution, as well as pollution of aquifers that recharge locally.

Jessa Rizzo

Project advisors: Dr. Michael Wolf and Dr. Jeffrey Strasser, geology

The Color and Clarity of Feldspars: Experiments in Heat Treating

Poster Session [P1] #18: Gävle Room, The Gerber Center

The purpose of this study is twofold: (1) to determine the effects of heat treating on feldspars and, thus, the effects on aesthetic value; and (2) to determine if the hues of amazonite correlate to the concentrations of Pb and water in the mineral. Four different types of feldspars were heat treated: heliolute, hecatolite, bytownite and peach hecatolite. In each experiment, part of the original sample was left unheated for comparison. Samples of the four minerals were heated in a muffle furnace to different temperatures (400-600 °C) and for different durations (30 min.-1 hr.). The heat-treated samples ended up having a lighter color compared to the non-heat treated samples. When the samples were heated at higher temperatures for a longer duration, the samples experienced loss in color, and cloudiness increased. The second part of this study focused on amazonite, a variety of microcline with a characteristic blue/green color. The amazonite samples were crushed up and analyzed using XRF spectroscopy. Results from the colorization of microcline have yielded similar outcomes to previous research by others (Rein et al., 2006), with no apparent correlation between hue and Pb content. Therefore, the lead content in the samples had no effect on the hue. Rather, samples with high concentrations of water showed an apparent correlation between color intensity and the amount of lead present. The Pb concentration shows no correlation to hue, but the Pb content does correlate with color intensity if there is also high concentrations of water.

John Malone

Project advisor: Dr. Michael Wolf, geology

Structure of the Southern Margin of the Big Horn Batholith, Wyoming: A Major Archean Shear Zone?

Poster Session [P1] #19: Gävle Room, The Gerber Center

During the summer of 2016, a group of field assistants and I conducted reconnaissance field mapping in the headwaters of Paint Rock Creek in the Cloud Peak Wilderness of the Big Horn Mountains in north central Wyoming to constrain the lithologies and structure of the rocks present along the junction of two Precambrian-aged terranes. The northern part of the Bighorn uplift is composed of the Big Horn Batholith, an "undeformed" composite granitic intrusion, whereas the central and southern area of the range exposes older quartzofeldspathic gneisses complexes as well as minor supracrustal rocks. This study aims to define the nature and extent of the UPRS. In particular, we want to verify if this contact is indeed a laterally persistent shear zone, or alternatively, is it an intrusive contact between the Big Horn Batholith and the southern gneiss terrane. If this boundary is indeed a laterally persistent shear zone, it would be among the most significant tectonostratigraphic boundaries in the Wyoming Archean Province. The fundamental contributions of this project include a detailed geologic map of the study area as well as stereographical projection of the fabrics of both migmatite and granite.

Robert Martin

Project advisors: Dr. Jeffrey Strasser and Dr. Michael Wolf, geology

Geochemical and Thin Section Analysis of the Coal Creek Serpentinite

Poster Session [P1] #20: Gävle Room, The Gerber Center

Serpentinite formation is associated with subduction zones where low to intermediate pressures and temperatures yield various polymorphs of serpentine. Serpentinite, in its purest form, forms

through the metasomatism of pyroxene, olivine and water. The serpentine group polymorphs that are created at different pressures and temperatures form various minerals such as lizardite, antigorite and chrysotile. Serpentinization occurs through two processes: constant-volume and constant-chemical reactions. Constant-volume reactions ($5\text{Mg}_2\text{SiO}_4 + 10\text{H}_2\text{O} \rightarrow 2\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4 + 4\text{Mg}^{2+} + 8(\text{OH}) + \text{H}_4\text{SiO}_4$) require the loss of 4 magnesium ions in the reaction, which results in a consistent volume of reactants and products (Frost). Constant-chemical reactions ($3\text{Mg}_2\text{Si}_2\text{O}_4 + \text{H}_4\text{SiO}_4 + 2\text{H}_2\text{O} \rightarrow 2\text{Mg}_3\text{Si}_2\text{O}_5$) require an extra addition of silica, which increases the total volume of the resulting products in the reaction (Frost). In order to interpret the probable parent rock and the conditions of serpentinization, serpentinite samples were collected in the Coal Creek Domain of the Llano Uplift in Gillespie County, Texas, and examined in thin section and XRF spectroscopy. Through XRF spectroscopy, the results show high percentages of MgO and SiO₂ and low amounts of CaO and Al₂O₃. The chemical compositions suggest that the parent rock is serpentinized harzburgite that consists of predominantly lizardite and cross-cutting chrysotile as verified through thin section analysis. The cross-cutting nature of the chrysotile suggests that this material formed at intermediate temperatures (300-400) that formed at depths of >50km (Schwartz et al., 2012)

Mark Lundine

Project advisor: Dr. Ranbir Kang, geology and applied mathematics

Channel Morphometry Analysis of Headwater Streams Using a Terrestrial Laser Scanner in Two Different Ecoregions

Poster Session [P1] #21: Gävle Room, The Gerber Center

A stream's channel morphology changes in response to alterations in erosion and deposition rates, which are governed by streamflow dynamics. These morphological changes can have highly consequential effects on the plant and aquatic life in and around the stream. Morphological studies on natural streams can provide substantial insights into streamflow dynamics and sediment transportation, as well as suggest the best conservation practices for stream restoration projects. Past studies have used field measurements to measure bankfull width, bankfull depth and bankfull cross-sectional areas (Harden et al., 2009; Lawlor, 2004). Terrestrial laser scanning (TLS) allows for high resolution morphological surveying of fluvial environments. This study implements a Leica Scanstation C10 TLS (resolution of 4.5mm at 0-50m) in two streams from source to mouth to create a 3D point cloud environment. 360° photographs were also taken at each scan site to be draped over the point clouds. The data was then imported into the point cloud processing software Cyclone, where each stream's scans were registered using overlapping points and scanning targets from adjacent scans. Point cloud model-spaces were then created to extract morphological data on the two streams. The morphological data was analyzed in the statistical analysis software Minitab to find upstream and downstream trends, as well as to compare the two streams with each other.

Allison Pease

Project advisor: Dr. Michael Wolf, physics and geology

Sea Level Budget Along the East Coast of North America

Poster Session [P1] #22: Gävle Room, The Gerber Center

We analyzed tide gauge data, taken from 1955 to 2015, from 29 locations along the east coast of North America, to aid in the completion of rate and acceleration sea-level budget. A well-documented period of sea-level acceleration began around 1990. The sea level rate (referenced to epoch 1985.0) and acceleration

(post-1990) are spatially and temporally variable, due to various physical processes, each of which is also spatially and temporally variable. To determine the sea-level budgets for rate and acceleration, we considered several major contributors to sea-level change: ocean density and dynamics, glacial isostatic adjustment (GIA), the inverted barometer effect, and mass change associated with the Greenland Ice Sheet (GIS) and the Antarctic Ice Sheet (AIS). The geographic variability in the budgets for sea-level rate is dominated by GIA. At some sites, GIA is the largest contributor to the rate. The geographic variability in the budgets for sea-level acceleration is dominated by ocean dynamics and density and GIS mass loss. To achieve a reasonable fit, a scaling factor (admittance) for the combined contribution of ocean dynamics and density was estimated; this admittance may reflect the low spatial sampling of the GECCO2 model we used, or other problems in modeling coastal sea-level. The significant contributions of mass loss to the acceleration enable us to predict that, if such mass-loss continues or increases, the character of sea-level change on the North American east coast will change in the next 50–100 years.

Zachary Cook

Project advisor: Dr. Michael Wolf, geology

Heavy Metal Contamination Found in Water Sources Throughout Mainland China

Poster Session [P1] #23: Gävle Room, The Gerber Center

Heavy metal contamination in water has been an environmental issue for decades. With the increase of industrialization, the amount of toxic emissions increases as well. In addition to multiple negative impacts on the environment, contaminated water can become a major health hazard for humans. China has had a rapid increase in industrialization in recent decades that has led to an associated increase in pollution in the world's second largest economy. In addition, an increasing population puts many at risk for health issues and pushes China to acknowledge and seek solutions to reduce its pollution. To gain a better understanding of the extent of China's contaminated water, 105 samples were gathered throughout 10 cities, each with different populations and geographic characteristics. Water samples were collected from natural sources, i.e. lakes, rivers, streams and rainwater puddles. Samples were not collected from tap water sources to avoid possible contamination leached from the pipes. Through X-ray spectroscopy, the water samples (dried onto microarray filter papers) were analyzed for lead and mercury. With these data, it is possible to determine correlations based on location. Concentrations of both metals in all locations were much lower than originally hypothesized, with the highest concentration peaking at only 14 ppm for lead and 8 ppm for mercury. However, locations with a smaller population and larger population densities were found to have the highest concentration of lead in their water. While low amounts of lead and mercury indicate an improvement on pollution released in China, any amount of lead and mercury found in the environment can be a potential health hazard for the citizens of China.

Sierra Kindley, Dr. Jeffrey Strasser, Dr. Michael Reisner, Dr. C. Kevin Geede

Project advisors: Dr. Jeffrey Strasser, Dr. Michael Reisner, Dr. C. Kevin Geede; geology and environmental studies

Environmental Geochemistry of Surface and Groundwater in Streams: The Study of an Urban Watershed in Rock Island, Illinois

Poster Session [P1] #24: Gävle Room, The Gerber Center

The objective of this research project is to compare levels of arsenic (As), mercury (Hg), lead (Pb) and selenium (Se) in surface and

alluvial groundwater in a highly urbanized watershed in Rock Island, Ill. The study consisted of 10 sampling sites located on tributaries characterized by some degree of remnant riparian forest zone. Piezometers were installed to a depth of 1m adjacent to the stream where access allowed. Surface and groundwater samples were collected biweekly during the months of June, July and August 2016. An X-ray Fluorescence Spectrometer (XRF) was used to test each sample individually for levels of As, Hg, Pb and Se. Levels of As were consistently the highest among the four tested metals, followed by Se, Pb and Hg. At the majority of the sites, levels of all four metals routinely exceeded both the acute and chronic aquatic life standards. There is no general pattern present between the amounts of metals in samples from neighboring sites within the watershed, nor is there a correlation between metal levels in the surface and groundwater samples collected from the same site. Preliminary analysis has found no relationship between surface and groundwater metal concentrations and known predictors of downstream water quality at the watershed level, including percent impervious surface and land use. Our findings suggest that metal concentrations are likely dependent on site-specific conditions and near-channel levels of disturbance. Future research will focus on quantifying these factors at each of the sampling sites to determine the factors that may cause elevated levels of certain metals at sites in the watershed.

Joseph Teresi

Project advisors: Dr. Michael Reisner, Dr. Jeffrey Strasser; geology and environmental studies

A Spatial Relationship Between Stream Slope Stability and Water Quality Within an Urban Watershed in Rock Island, Il

Poster Session [P1] #25: Gävle Room, The Gerber Center

The consistently observed phenomenon of highly altered streams and degraded water quality draining urban areas across the United States is described as the urban stream syndrome. Rock Island, Ill., has a population of nearly 39,000 people, and houses industrial and logistical businesses amidst a city of aging infrastructure. Streams occupy ravines that have incised into the Quaternary loess plateau, flowing south toward the Rock River and north or west toward the Mississippi River. In an attempt to understand better the severity of Rock Island's urban stream syndrome, this project analyzed stream slopes within the Rock Island watershed to categorize their level of instability and differentiate more or less stable sites based on dimensional measurements of the stream, bank angle, etc. Bank stability scores were then compared to hazardous levels of phosphates, chlorides, total suspended solids (TSS) and total dissolved solids (TDS), as well as stream discharge. Definitive results show that all sites within the watershed have TDS, TSS and phosphate levels well above the maximum contaminant levels set by the EPA, while a majority of the sites had safe levels of chlorides. In general, water quality improves with distance downstream. Of the 20 sites studied in this highly urbanized watershed, nine ranked as having moderate instability while 11 had high instability. TDS, TSS and chlorides correlated reasonably well, in that high concentrations of each correlated positively with more unstable sites. Phosphates and stream discharge did not present patterns when compared to the stability ratings. Consequently, this rating system requires refinement to better distinguish stream slope stability. This project recommends that the City of Rock Island communicate to residents the importance of mitigation strategies to reduce bank erosion and water pollution. Rock Island and other communities need to work to lower urban pollutants draining into the Mississippi, given the hypoxic conditions and consequent ecological degradation observed downstream and in the Gulf of Mexico. Moreover, healthy urban aquatic ecosystems increase their aesthetic qualities while decreasing their environmental hazards.

Michael Carlson, Dr. Cecilia Vogel

Project advisor: Dr. Cecilia Vogel, engineering physics

Brake Specific Fuel Consumption (BSFC) in Gasoline Powered Cars

Poster Session [P1] #26: Gävle Room, The Gerber Center

The goal of this experiment was to determine which driving behaviors result in the highest fuel efficiency for a given trip. We collected data for speed (MPH), engine speed (RPM), engine power (Torque/LOD) and fuel consumption (MPG) using the ScanGauge II.

Peter Francissen, Dr. C. Kevin Geedey, Dr. Michael Reisner

Project advisors: Dr. C. Kevin Geedey, Dr. Michael Reisner; biology and environmental studies

The Effects of Urbanization on Nitrogen Processing in Urban Streams

Poster Session [P1] #27: Gävle Room, The Gerber Center

Urban stream syndrome is described as the deterioration of stream health in an urbanized watershed and is associated with the loss of ecosystem services, which in turn degrades downstream environments. One key symptom of the urban stream syndrome is reduced processing of inorganic nitrogen. Previous research suggests that as urbanization increases and water quality decreases, the uptake length (Sw) of inorganic N increases. This indicates that the stream is increasing the export of N downstream compared to in situ incorporation of N into the ecosystem. We measured uptake length (Sw) of NO₃, using a pulse addition method, along nine reaches located within an urban watershed in Rock Island, Ill., that drains into the Rock River. The sites were chosen to represent varying levels of urbanization throughout the watershed. We found evidence of significant nitrogen uptake along stretches at seven of the nine sites we tested, indicating some level of ecosystem services are still being performed in this watershed in spite of the urban setting. We also wanted to see if background concentrations of nutrients or pollutants impacted nitrogen uptake. We predicted that higher background pollutant levels would increase the uptake length; however we found no such correlation. Our key finding was evidence of N uptake occurring across an urban watershed, which differed from most research done on this topic.

Matthew Tuttle-Timm

Project advisor: Dr. Nathan Frank, physics

Resonances of 25,26F Atomic Nuclei

Poster Session [P1] #28: Gävle Room, The Gerber Center

The structure of very unstable atomic nuclides are still not completely understood. The unstable atomic nuclides in this study emit a neutron, which requires determining the energy of decay to better understand the structure. The energy of decay may be calculated from the energy and momentum of the remaining charged fragment and neutron. From the calculated decay energy, information about an isotope's nuclear structure can be found. At the National Superconducting Cyclotron Laboratory experiment, a 27Ne ion beam hit a liquid deuterium target that resulted in many produced atomic nuclides. One of the isotopes produced was unstable 26F, formed by stripping a proton from the 27Ne beam. The unstable 26F decayed into 25F + n. Another nuclide produced was unstable 25F, formed by stripping a proton and neutron from the 27Ne beam. 25F further decayed into 24F + n. The energy of the decays of both 25F and 26F were calculated from data. This presentation will report on the current analysis and compare/contrast these data to prior experimental results and theoretical calculations.

Luke Robinson

Project advisor: Dr. Forrest Stonedahl, applied mathematics

Unsupervised Machine Learning in Agent-Based Modeling

Poster Session [P1] #29: Gävle Room, The Gerber Center

Agent-based models (ABMs) are used by researchers in a variety of fields to model natural phenomena. In an ABM, a wide range of behaviors and outcomes can be observed based on the parameters of the model. In many cases, these behaviors can be categorized into discrete outcomes identifiable by human observers. Our goal was to use clustering algorithms to identify those outcomes from model output data. For this project, we used data from the NetLogo Wolf Sheep Predation model to explore and evaluate three clustering algorithms from Python's scikit-learn package. If this task can be completed reliably by a computer, it will make the task of analyzing and understanding ABMs easier for human users.

Marlisa Barrett

Project advisors: Rebecca Zitzow and Quan Vi, communication and marketing

Photo Bureau Portfolio

Poster Session [P1] #30: Gävle Room, The Gerber Center

This is a collection of photos taken for Augustana Photo Bureau throughout the school year.

Amanda Moore

Project advisors: Rebecca Zitzow and Quan Vi, communication and marketing

Photo Bureau Portfolio

Poster Session [P1] #31: Gävle Room, The Gerber Center

This is a collection of photos taken for Augustana Photo Bureau throughout the school year.

Emma Stough

Project advisors: Rebecca Zitzow and Quan Vi, communication and marketing

Photo Bureau Portfolio

Poster Session [P1] #32: Gävle Room, The Gerber Center

This is a collection of photos taken for Augustana Photo Bureau throughout the school year.

Allen Bertsche***Augie Abroad Photo Contest Ceremony***

Poster Session [P1] Near fireplace outside Gävle Room, The Gerber Center

Each year Augustana celebrates its culture of study away through the Augie Abroad Photo Contest. Students are invited to submit photos taken as part of Augustana study away programs from the past year in four categories: architecture and design, culture and celebration, nature, and images of Augustana students. During Celebration of Learning, the winning photos are revealed and placed on display in The Gerber Center and Thomas Tredway Library. This year we will showcase an outstanding selection of photos from places and programs as diverse as Spain, Australia, India and from the Asia trip.

POSTER SESSION 2 | 11-11:45 a.m.

Poster Presentation Layout | The Gerber Center, Gävle Room

- 1 Emma Nordmeyer
- 2 Tori Charnetzki, Joe Oliger
- 3 Brittany Poynor, Layne Porembski, Arielle Bloemer,
Brandon Schattner, Sarah Hanson
- 4 Marissa Iverson, Caitlan Lange
- 5 Tanner Osing
- 6 Melisa Ribikawskis, Kirsten Burke, Krista Dawson,
Kayln Engel, Shavaun Grant, Allison Groch, Kayleen Macy,
Claire Martin, Tanner Osing, Benjamin Payne, Margaux
Payne, Nicholas Phalen, Samuel Templeman, Mark
VanderHeyden, Noel Zapata

POSTER SESSION 2

Sustainable Working Landscapes Initiative (SWLI)

GÄVLE ROOM, THE GERBER CENTER

11-11:45 a.m.

Emma Nordmeyer

Project advisor: Dr. Angie Carter, sociology

How Do Communities Proactively Address Lead Remediation? Community Case Studies from Iowa

SWLI Poster Session [P2] #1: Gävle Room, The Gerber Center

Scott County Health Department officials reached out to the Sustainable Working Landscapes Initiative (SWLI) program at Augustana College to start a partnership to address environmental issues related to lead hazards in Scott County homes. Students in Fall 2016 Contemporary Social Issues class worked in teams to perform case studies on communities in Iowa that address lead remediation proactively. Teams of students studied Dubuque, Linn, Polk, Marshall and Black Hawk counties in Iowa. The students worked to identify obstacles, successes, key questions and recommendations for future directions in lead remediation from these communities. This report is a summary of those findings.

Tori Charnetzki, Joe Olinger

Project advisor: Dr. Carolyn Yaschur, multimedia journalism and mass communication

Lead Poisoning: Diagnoses and Recovery

SWLI Poster Session [P2] #2: Gävle Room, The Gerber Center

This is a journalistic piece that tells the story of a family affected by lead poisoning in Scott County. It was created in collaboration with the Upper Mississippi Center.

Brittany Poynor, Layne Porembski, Arielle Bloemer, Brandon Schattner, Sarah Hanson

Project advisors: Dr. John Delaney, accounting; Dr. Michael Reisner and Rosalie Starenko, Upper Mississippi Center

Exploring Alternative Funding Methods for the Lead Remediation Program in Scott County, Iowa

SWLI Poster Session [P2] #3: Gävle Room, The Gerber Center

For this project, five students worked to put together five alternative funding solutions for the Scott County Health Department's lead remediation program. With limited government grants available, the health department is now considering local funding in order to address the issue of lead poisoning in Davenport, Iowa. These reports, along with other Sustainable Working Landscapes Initiative (SWLI) research, provide valuable information and are the foundation of the up-and-coming remediation program for the county.

Marissa Iverson, Caitlan Lange

Project advisors: Dr. Jennifer Burnham, geography; Rosalie Starenko, Upper Mississippi Center

Scott County Lead Risk Maps

SWLI Poster Session [P2] #4: Gävle Room, The Gerber Center

These maps have been created to express the lead risk levels within the communities of Davenport, Iowa. The maps' design has been chosen with great thought given to what information is being provided and how it will be viewed by the audience. The audience will be the residents of Davenport.

Tanner Osing

Project advisor: Dr. Lena R. Hann, public health

Addressing Childhood Lead Poisoning with GIS: A Proactive Approach in Scott County, Iowa

SWLI Poster Session [P2] #5: Gävle Room, The Gerber Center

Many communities are weathering lead's detrimental health impacts on children, and health departments are looking for new ways to address the problem. Addressing childhood lead poisoning through geographic information systems (GIS) allows health departments to shift from a reactive approach to a proactive approach. While using GIS to analyze lead exposure risk is not new, the scale used in this study, which analyzes risk at the tax parcel level, is less common. The tax parcel level is the most detailed scale that can be examined for residential properties, the place where children are most commonly exposed to lead. Taking place in Scott County, Iowa, where approximately 50 children are diagnosed with lead poisoning every year, this study presents an exposure risk model using four widely recognized risk factors of housing age, median household income, renter occupancy and African-American populations. A GIS spatial analysis was conducted after these risk factors were categorized and weighted against one another to produce a lead exposure risk map. The resulting risk map displays residential properties in four priority levels that can be used by public health officials for targeted prevention programs at areas of greatest impact. Ultimately, this study hopes to reduce the number of lead contaminated residences and in turn, prevent children from being exposed to lead. Since similar risk models have been found generalizable, this model's applications may stretch beyond Scott County, Iowa.

Melisa Ribikawskis, Kirsten Burke, Krista Dawson, Kayln Engel, Shavaun Grant, Allison Groch, Kayleen Macy, Claire Martin, Tanner Osing, Benjamin Payne, Margaux Payne, Nicholas Phalen, Samuel Templeman, Mark VanderHeyden, Noel Zapata

Project advisor: Dr. Christopher Strunck, environmental studies and geography

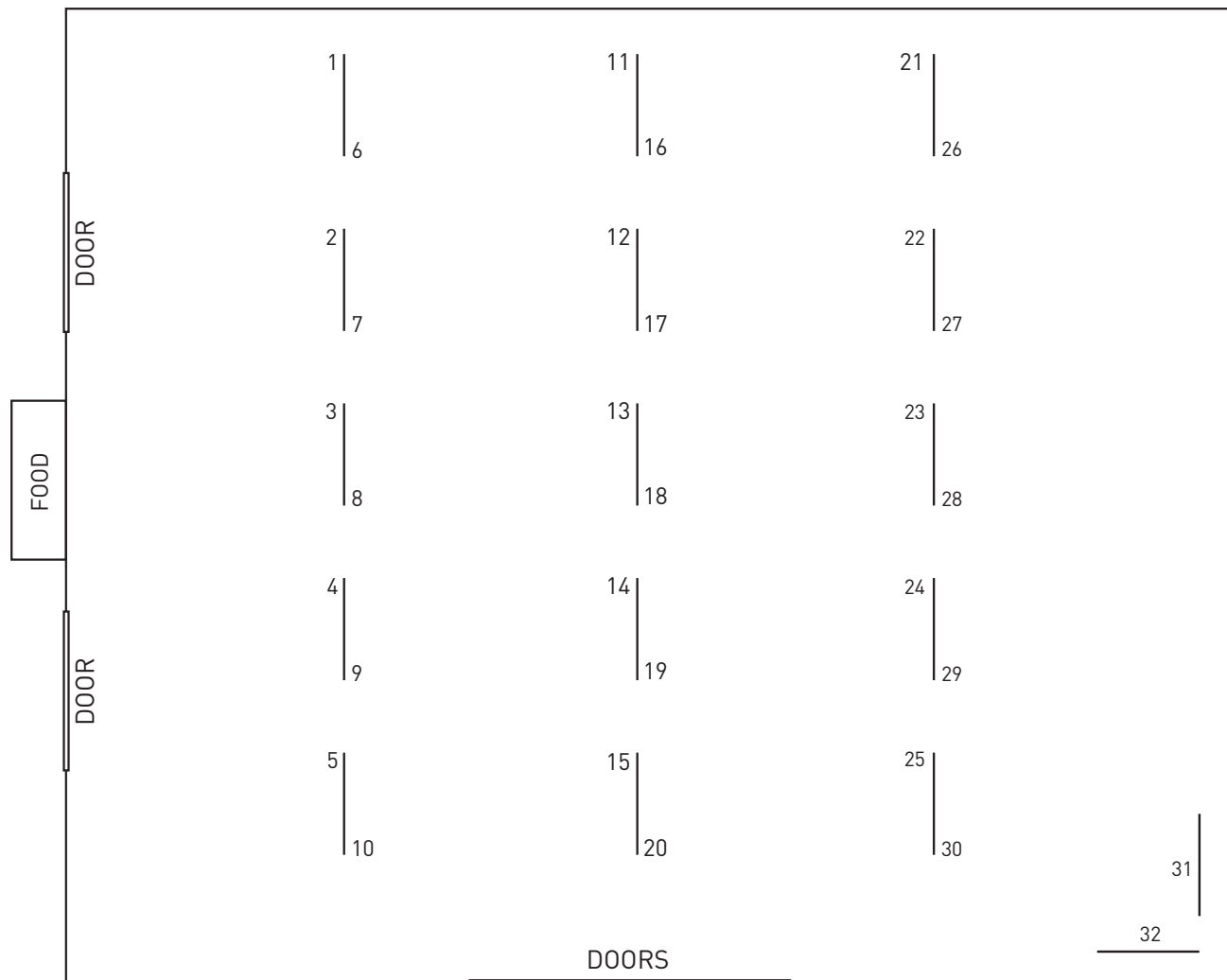
DeWitt Smart Growth Design

SWLI Poster Session [P2] #6: Gävle Room, The Gerber Center

As part of the Sustainable Working Landscapes Initiative (SWLI) project, our Urban Design and Sustainable Cities class researched Smart Growth principles and their applicability for the city of DeWitt, Iowa. Smart Growth is a cohesive set of design philosophies that prioritizes mixed-use development over single-use development, pedestrian-friendly and bike-friendly transportation over automobile-dominated transportation, and infill development over peripheral development. Dozens of government, business and civic organizations—including the United States Environmental Protection Agency (EPA)—have recognized the movement by founding the Smart Growth Network, a national organization that focuses on the promotion of these principles. Local officials in DeWitt are revising the city's zoning regulations and are interested in incorporating the principles of Smart Growth into their plans. This class project examined ways to improve the city of DeWitt in terms of Smart Growth principles such as infill development and adaptive reuse, mixed-use development, environmental and agricultural development, setbacks, lot sizes and the walkability of the city.

POSTER SESSION 3 | 3:15-4:30 p.m.

Poster Presentation Layout | The Gerber Center, Gävle Room



- 2 Buck Webb
- 3 Nora Graehling
- 4 An Nguyen Dang
- 5 Mark Lundine, Myles Wallin, Luke Robinson, Ying Zhao
- 6 Riley Kenning
- 7 Crystal Gray, Dr. Amanda Owen Van Horne
- 8 Dr. Ann Perreau, Alexandra Watts, Dr. Dan Corts
- 9 Cheyenne Morton, Garrin Jost, Alyssa McCannon, Alexandra Madison, Emma Morawski, Emily McHugh
- 10 Michael Dax
- 11 Douglas Williams
- 12 Madeline Crook
- 13 Carly Adams
- 14 Rachel Butter
- 15 Amanda Cipek
- 16 Emily Grace

- 17 Alyssa Hernandez
- 18 Nicole Morrissey
- 19 Dr. Jessica Nodulman
- 20 Hannah Lindaman
- 21 Brenna Whisler
- 22 Irene Mekus
- 23 Melissa Coons
- 24 Jessica Czarnecki, Kristina Humphreys, Danielle Hurmis, Colin Kalmes, Lauren Pasetes, Megan Steinhoff, Steven Todorov, Dr. Shara Stough
- 25 Phoebe Strell, Payton Petruchuis, Nora Bosslet, Allison Bjork
- 26 Ashley Adams, Courtney English, Summer Lawrence, Zachery Yakey, Erin Ansusinha, Rupa Gordon
- 27 Jessica Czarnecki, Theresa Nalty
- 28 Cassidy Belske

POSTER SESSION 3

GÄVLE ROOM, THE GERBER CENTER

3:15-4:30 p.m.

Snacks will be served during this poster session.

Buck Webb

Project advisor: Dr. Jane Simonsen; history, women's and gender studies

The Problem with Pussy

Poster Session [P3] #2: Gävle Room, The Gerber Center

An exploration into the harmful uses of the vagina as a symbol of feminism.

Nora Graehling

Project advisor: Dr. Sheila Goins, business administration

Generational Differences in the Workplace

Poster Session [P3] #3: Gävle Room, The Gerber Center

Within the workforce, there are different generations that are expected to interact and communicate ideas effectively. Certain stereotypes have been known to come between different cohorts, causing a lack of communication and productivity. I am curious as to how well known these stereotypes are among each generation and how they effect their workplace.

An Nguyen Dang

Project advisor: Dr. Forrest Stonedahl, computer science

Migrating BehaviorSearch's User Interface from Swing to JavaFX

Poster Session [P3] #4: Gävle Room, The Gerber Center

Agent-based models (ABMs) is a genre of computer modeling that simulates actions and interactions between individual entities (agents). ABM is widely used to simulate behavior in many fields, including biology, ecology, chemistry, physics, economics and social science. NetLogo is a well-known, agent-based programming language that provides a powerful platform to build and examine ABMs. However, to fully analyze a model, one must run the model many times with different parameters, which can be a daunting task. Therefore, Dr. Forrest Stonedahl developed BehaviorSearch, a software tool to help with automating the exploration of ABMs. The software interfaces with the NetLogo platform and allows the client to search for combinations of model parameter settings that will result in a specified target behavior. The earlier version of BehaviorSearch uses the Swing UI library for its user interface, which has several disadvantages, including: 1) Graphical components and controlling methods are embedded in the same code, which makes the code really long and hard to debug; 2) The interface's style is dated back to Windows 2000; 3) Swing doesn't support displaying charts inherently; and 4) Application doesn't scale well to modern high-resolution screens. My project focused on migrating the user interface to the JavaFX library, which fixed all of the problems listed above. JavaFX allows the separation of graphical component into an .FXML file. It also supports CSS3 styling and chart display. Overall, this project modernized the look and feel of the BehaviorSearch program and improved its compatibility with newer hardware.

Mark Lundine, Myles Wallin, Luke Robinson, Ying Zhao

Project advisor: Dr. Stacey Rodman, applied mathematics

Creating a Pricing Model for a Chicagoland Limousine Company

Poster Session [P3] #5: Gävle Room, The Gerber Center

Current pricing models for the black car industry are outdated. These outdated models use fixed rates that often cause overpricing and under-pricing of certain trips, making the company less competitive with more modern companies like UberBlack. Many factors affect the cost of limousine trips, but in the past, it has been impractical to implement these factors into pricing models. With advancements in statistical and scripting tools, additional factors can be included to develop a more accurate and adjustable pricing model. Our team has been creating a pricing model for 38th Street Studios, a partner of Windy City Limousine, which is a black car company based in Chicagoland. We began our investigations by making conjectures on different factors to include in a general pricing model, including location, gas prices, trip times, trip distances and vehicle types. We then used statistical and spatial analysis of historical data to write a Python script of an automated pricing model.

Riley Kenning

Project advisor: Dr. Jane Simonsen; history, women's and gender studies

Corporate Pride

Poster Session [P3] #6: Gävle Room, The Gerber Center

This project is a zine created to examine the ways in which "pride parades" have shifted from their radical beginning in the fight for LGBT rights, which addressed the ways in which this oppression is rooted in the capitalist system in the United States. They are now events largely hosted and sponsored by corporations that do not participate in the fight for LGBT liberation.

Crystal Gray, Dr. Amanda Owen Van Horne

Project advisor: Dr. Amanda Owen Van Horne, communication sciences and disorders

Changes in Grammatical Accuracy in Narrative Retells by Children with Specific Language Impairment Following Recast Intervention

Poster Session [P3] #7: Gävle Room, The Gerber Center

We examined whether improvements in finite morpheme use would be observed in the narrative retells of children with specific language impairment (SLI) after receiving intervention focused on regular past tense. We also investigated whether these gains would influence on unrelated linguistic measures, such as MLU in words, lexical diversity, number of utterances, and use of noun markers. Twelve children with SLI (ages 4-10) received 36 intervention sessions over a six-month period (approximately 45-minute sessions twice a week). Intervention techniques included sentence imitation, observational modeling, syntax stories and recasting. Narrative retells of Mercer Mayer's "Frog, Where Are You" story were used to assess progress at three time points: pre-test, immediate post-test and delayed post-test (4-8 week delay following intervention). We hypothesized that children would show significant improvements in regular past tense use and some improvement in other finite morphemes from pre- to post-test. Additionally, we hypothesized that little to no significant improvements would be made in unrelated linguistic measures. Results will be discussed in the context of changes in morphological accuracy after intervention and will include clinical implications.

Dr. Ann Perreau, Alexandra Watts, Dr. Dan Cortis

Project advisor: Dr. Ann Perreau, communication sciences and disorders

Listening Effort Measured Across Different Cochlear Implant Profiles

Poster Session [P3] #8: Gävle Room, The Gerber Center

Several studies have examined listening effort in individuals with hearing loss to determine the extent of impairment. Regarding cochlear implants (CIs), results have found that listening effort is improved using bilateral CIs compared to unilateral CIs. However, few studies have investigated listening effort and the short electrode CI. The purpose of this study was to compare listening effort across three CI groups and to a normal hearing control group. The participants completed a dual-task paradigm with a primary task identifying sentences in noise and a secondary task measuring reaction time on a Stroop test. Performance was assessed at different signal-to-noise ratios (SNR), ranging in 2-dB steps from 0 to +10 dB, which was individually selected based on the individual's SNR-50, or SNR required to correctly repeat 50% of the sentences. The participants also completed subjective questionnaires. Results revealed a significant decrease in listening effort for listeners with normal hearing compared to bilateral CI users. Interestingly, there was no significant difference in listening effort between the three CI groups. Finally, results found that age was significantly correlated with listening effort.

Cheyenne Morton, Garrin Jost, Alyssa McCannon, Alexandra Madison, Emma Morawski, Emily McHugh

Project advisors: Dr. Randy Hengst and Dr. Mike Egan, education

Exploring the Implementation of Combining Technology and Tangible Manipulatives During Kindergarten Math Interventions

Poster Session [P3] #9: Gävle Room, The Gerber Center

Children entering kindergarten bring with them a wide range of math-related experiences. While some students begin the year with math skills learned from preschool programs or their parents, some students begin with few or no math skills whatsoever. With the implementation of Common Core mathematics standards, beginning in kindergarten, students without these early math skills often fall behind. In an attempt to accelerate these students' learning and help them perform at grade level, we have been working with cooperating kindergarten teachers and our program advisors to develop a multi-sensory approach to early math intervention. By using an approach that features manipulatives, number writing, drawing, discussion and technology, we've provided these struggling students with many opportunities that the classroom experience wouldn't be able to facilitate.

Michael Dax

Project advisor: Dr. Lendol Calder, history

Asking the Right Questions: Historical Inquiry of the 1960s in the High School Classroom

Poster Session [P3] #10: Gävle Room, The Gerber Center

This project will explore multiple skills used by historians, and the way these skills can be taught in the high school classroom. The project will use a variety of events from the 1960s history of the United States to teach a list of skills used by historians.

Douglas Williams

Project advisor: Dr. Lendol Calder, history

Corn, Cities, and Trains: Investigative Approach of Illinois Historical Settlement Through Local History

Poster Session [P3] #11: Gävle Room, The Gerber Center

I am constructing a unit for an Illinois History class. The unit will focus on the early settlement and rise of the state. The unit will be based on the investigative approach with a large focus on local historical sources. The unit will go from the introduction of the topic until the final assessment.

Madeline Crook

Project advisor: Dr. Dara Wegman-Geedey, biology

Pre-Health Professions Service-Learning vs. Medical Missions: Who Says They're Ethical?

Poster Session [P3] #12: Gävle Room, The Gerber Center

Many undergraduate pre-health professions students are eager to get experience working with real patients. A number of service-learning (S-L) programs are available, allowing these students to work with healthcare providers in developing Central American (CA) nations. Some of these programs are coordinated through a college or university for a specific group of students, but other programs are open to individual students who meet the program staff and other students on the first day of the trip. This project determined if participation in these programs is ethical when considering the standards of care and training required for patient contact in the United States vs. Central America. I compared four third-party providers of healthcare S-L programs in CA to establish if aspects that contribute to ethical care, such as mission statements, were present. I also compared the parameters of S-L experiences with those of medical mission trips, to determine the standards of healthcare training required for participants in direct contact with patients. The goal was to understand if an equal standard of care could be achieved and was being achieved by both, and if not, what was causing this difference. This poster is in partial fulfillment of my Honors Capstone study.

Carly Adams

Project advisor: Dr. Lena R. Hann, public health

Hospital Infection Prevention Training Materials: Proper Environmental Cleaning of Vitals Machines to Reduce the Transmission of Clostridium difficile

Poster Session [P3] #13: Gävle Room, The Gerber Center

After completing a Dazo study at UnityPoint-Trinity Hospital, results showed that proper environmental cleaning of vitals machines was completed by staff only 19% of the time. To address this public health concern, it became important to create an educational training guide and informational poster for patient care technicians. The Dazo study prompted a literature review to better understand the evidence-basis for environmental cleaning and *Clostridium difficile* (*C. diff*). Research determined that proper cleaning can be conducted by keeping high-touch surfaces wet for 3-5 minutes using a hypochlorite solution. High compliance rates of this protocol will help reduce the spread of *C. diff* and other hospital-acquired infections. The goal of this Senior Inquiry deliverable project is to increase compliance rates of proper environmental cleaning by educating patient care technicians with a training guide and poster.

Rachel Butter

Project advisor: Dr. Lena R. Hann, public health

Learning Is Fun: An Educational Toolkit To Assess the Needs of Disabled Young Adults

Poster Session [P3] #14: Gävle Room, The Gerber Center

Hand-in-Hand is a non-profit organization that creates fun learning experiences for both children and adults. This project utilized past research data from Hand-in-Hand to create an educational toolkit that will help the students in Hand-in-Hand's after-school program

accomplish their SCL (Supports for Community Living) goals. SCL goals help the students at Hand-in-Hand become more comfortable in society and help develop their independence by working on everyday tasks. The toolkit includes a handout, outline and a PowerPoint presentation with a list of indoor and outdoor activities appropriate for the Hand-in-Hand students. This toolkit was provided to the agency so that staff can help students choose activities when there is nothing else planned for the day. This project is important because it incorporates the goals of the students with past research to find the best programs and activities that are educational and promote a fun learning environment.

Amanda Cipek

Project advisor: Dr. Lena R. Hann, public health

Hospital Acquired Infections: Being Your Own Healthcare Advocate

Poster Session [P3] #15: Gävle Room, The Gerber Center

The purpose of this Senior Inquiry project is to educate patients and their families about the risks of hospital acquired infections (HAIs). Patient competency is an important part of healthcare, and it is becoming a focus for medical practitioners to encourage their patients to be more involved in decisions that impact their health. Hospital-acquired infections such as *Clostridium difficile*, MRSA, influenza, catheter-associated urinary tract infections and central line-associated bloodstream infections occur at endemic rates in hospitals around the United States, including UnityPoint-Trinity in Rock Island, Ill. The transmission of these infections can occur due to unwashed hands of patients, family members and healthcare providers. Review of literature and evidence-based education materials that address HAIs informed the creation of a poster for patient rooms at UnityPoint-Trinity. Incidence and prevalence rates of HAIs that occur at UnityPoint-Trinity were used to decide which infections were important to include. Collaboration with a graphic design major resulted in a comprehensive and understandable poster. These posters will be displayed in patient rooms. They include information about HAIs and strategies for patients and families to be vigilant about the hand-hygiene practices of their different healthcare providers. Encouraging patients to be advocates for their own healthcare can aid in preventing infections and illnesses in a more productive way. Future Senior Inquiry students can measure if this method of education impacted the incidence and prevalence rates of these infections.

Emily Grace

Project advisor: Dr. Lena R. Hann, public health

Cultural Competence in Hospice Volunteers: Developing a Training Toolkit for Heartland Hospice

Poster Session [P3] #16: Gävle Room, The Gerber Center

This public health Senior Inquiry project developed a cultural competency toolkit for Heartland Hospice in Davenport, Iowa, that will train volunteers to be more culturally aware of their clients' specific needs. The toolkit includes activities, handouts, a PowerPoint presentation and discussion questions. The first phase of developing the cultural competence training toolkit was a literature review of peer-reviewed articles from 1996 to date about key concepts of cultural competency, including cultural knowledge, self-awareness and the effects of a cultural competence training. The second phase was to work with Heartland Hospice to gather existing materials that served as the foundation of the toolkit. The aim of the toolkit is to strengthen patient-volunteer relationships as well as achieve Heartland Hospice's goal of providing high-quality care. This toolkit will also be step forward to reducing racial

disparities among healthcare. The literature suggests that providing a family with culturally competent volunteers is imperative and essential for quality care. The toolkit will provide Heartland Hospice with the materials they need to move forward in the process of developing a more culturally competent workforce.

Alyssa Hernandez

Project advisor: Dr. Lena R. Hann, public health

Wheels that Heal: Instilling Self-Sufficiency in Domestic Violence Shelter Clients Through Reliable Transportation

Poster Session [P3] #17: Gävle Room, The Gerber Center

This Senior Inquiry focused on creating a guideline of rules to run a transportation system for the Family Resources domestic violence shelter in Davenport, Iowa. Instilling self-sufficiency among clients is the overall goal of domestic violence shelters. Reliable transportation plays a major role in this. To be self-sufficient, clients must obtain jobs, have a stable daily life routine and be able to provide for themselves and their families. Clients must be able to make it to work and back every day to have a steady source of income. Although there is a public bus system available in the Quad Cities, many clients find the operating hours restrictive and the schedule difficult to navigate. As a solution to this transportation barrier, a foundation for an accessible and reliable transportation system was created to cater to the needs of domestic violence shelter clients. A need for transportation was identified through the qualitative methods of surveys, focus groups and observations made while interning at Family Resources domestic violence shelter. Through these methods, it was identified that transportation is a major barrier to shelter clients becoming able to take care of themselves and their families after leaving a domestic violence situation. Developing new transportation options will allow clients to not only feel hopeful about their future, but also provide them with additional tools necessary to build a new life free of violence.

Nicole Morrissey

Project advisor: Dr. Lena R. Hann, public health

Emergency Room Overuse and Medicaid Population: Creating a Toolkit to Decrease ER Misuse by Family Resources Clients

Poster Session [P3] #18: Gävle Room, The Gerber Center

One of the biggest issues facing healthcare in the United States is excessive spending on Emergency Room (ER) visits. It costs the United States' healthcare field about \$38 billion a year to treat patients who might not necessarily need the immediate attention. The Medicaid population is one of the highest users of the ER. The most common reasons for going to the ER are behavioral issues and having no other place to go. Family Resources, a non-profit organization in Davenport, Iowa, works to connect families with healthcare facilities in the area based on each family's needs. Many of the clientele use Medicaid and struggle with the ER. To combat this issue, a toolkit was created to inform and educate Family Resources' Medicaid population on when it is appropriate to take a child to the emergency room and when they might need help from other healthcare professionals. This toolkit includes an educational brochure for the families, a PowerPoint presentation, and a training outline for staff who will give the presentation. The brochure contains information on clinics in the area that accept Medicaid, the suicide hotline and a flow chart of which health facilities are appropriate for different issues and emergencies. This toolkit provides Family Resources an evidence-based foundation that it can continue to build on as client needs evolve.

Dr. Jessica Nodulman

Sowing the Seeds of Peace: The Development of a Meditation and Mindfulness Program Series for Genesis Grief Support

Poster Session [P3] #19: Gävle Room, The Gerber Center

Meditation and mindfulness programs lead to improvements in anxiety, depression and stress (Goyal et al., 2014) as well as increases in overall wellness and quality of life (Manocha, Black, & Wilson, 2012). With funding from the New Faculty Research Fund and the Faculty Research Fund, I became a certified meditation and mindfulness instructor. I then developed a free meditation and mindfulness program series for Genesis Grief Support, titled "Sowing the Seeds of Peace." I partnered with Genesis Grief Support because it is a Quad Cities organization that serves people with a special health and wellness need. In this presentation, I will discuss the meditation certification process, recruitment of a community partner, development of program content, recruitment of participants, assessment measures and outcomes, and contributions to the health and wellness of the community.

Hannah Lindaman

Project advisor: Dr. Lena R. Hann, public health

Reassess for Highest Success: Formal Report To Reassess Visual Assessment Techniques in Lead Project for Scott County

Poster Session [P3] #20: Gävle Room, The Gerber Center

The Upper Mississippi Center has been working closely with Scott County Health Department on a two-year project addressing the stunningly high rates of lead poisoning in parts of Scott County, Iowa. This formal report correlates visual characteristics with the risk-category of lead poisoning in specific parcels in Scott County. Data was collected from the pilot survey in the winter of 2016 and used to run tests using SPSS to find relationships between the visual characteristics that were assessed and the risk-category of the parcel. This report aims to address the fact that the standard for residential visual assessment has a multitude of criteria that seems excessive for what it is trying to accomplish. By finding the highest correlations between visual characteristics and the risk category it falls into, the report will be able to communicate which criteria are more than likely necessary for visual assessment and which criteria are the least correlated and seemingly unnecessary. It is hopeful that this formal report will be used to make visual surveying more efficient for this project's full-scale survey and will be able to be applied to other lead projects as well.

Brenna Whisler

Project advisor: Dr. Lena R. Hann, public health

'Taking the Lead' in Lead Poisoning: Redesigning Lead Poisoning Education Materials for the Scott County Health Department

Poster Session [P3] #21: Gävle Room, The Gerber Center

This Senior Inquiry aimed to update lead poisoning education materials at the Scott County Health Department in conjunction with the Live Lead Free program following a two-trimester internship. The redesigned handouts focus on both nutritional and environmental factors that cause lead poisoning, prevent reinfection and reduce lead levels in a lead-poisoned child. Health professionals at the Scott County Health Department will use these materials to easily and concisely explain lead poisoning to families of children impacted by lead poisoning. Qualitative methods were used to

recreate the materials. Observation of public health professionals interacting with families of lead-poisoned children was the primary method. Other methods included: review of evidence-based toolkits created by other health departments, individual interviews with health professionals at the Scott County Health Department, and implementation of health literacy strategies. An Augustana College graphic design student created new visuals to help the educational materials appeal to a variety of audiences. Ultimately, the redesigned materials can help reduce the prevalence of lead poisoning in Scott County through education and prevention.

Irene Mekus

Project advisors: Dr. Chris Strunk, geography; Dr. Lena R. Hann, public health

Going to the Market! Identifying Barriers and Increasing Access to Farmers Markets for Rock Island County WIC Program Recipients

Poster Session [P3] #22: Gävle Room, The Gerber Center

WIC (Women, Infants, Children) is a supplemental food program for mothers and children up to the age of 5 who are at nutritional risk. WIC recipients receive food vouchers to use at grocery stores year-round, and during the summer, they receive special vouchers to use at farmers markets for fresh fruits and vegetables. In Rock Island County, less than 50% who receive the farmers market vouchers actually use them. Interviews with WIC participants and WIC staff revealed that markets should be more accessible to WIC participants' unique needs. This Senior Inquiry project combines public health and geographic perspectives to examine how Rock Island's location, as part of a cross-state metropolitan area, affects market use. Barriers such as market times, location and social capital play into how WIC recipients navigate grocery shopping and farmers markets. This project culminated in a formal recommendation for the Rock Island County Health Department regarding next steps in making farmers market vouchers more useful for WIC recipients.

Melissa Coons

Project advisor: Dr. Lena R. Hann, public health

Autism Speaks Loudly to All Who Listen: Autism and Applied Behavioral Analysis Awareness

Poster Session [P3] #23: Gävle Room, The Gerber Center

Autism spectrum disorder is a growing concern in society today. Whether it is due to the change in the Diagnostic and Statistical Manual standards of autism or that more children are being born with autism over the years, the fact is that the prevalence of autism is increasing. Applied Behavioral Analysis (ABA) therapy is one way to work with children who have autism. The Quad Cities Autism Center in Moline uses ABA therapy to help children with autism learn and perform the activities of daily living. A brochure was created to increase awareness of autism and the Quad Cities Autism Center. It was made for parents coming into a physician's office with young children who may have autism. The brochure informs the parents of the red flags of autism and has space for the parents to fill out the instances where these red flags occur for their own child. The brochure also includes information about the Quad Cities Autism Center and ABA therapy. It is important to spread awareness of autism spectrum disorder and the resources within the Quad Cities for those who are living with autism.

Jessica Czarnecki, Kristina Humphreys, Danielle Hurmis, Colin Kalmes, Lauren Pasetes, Megan Steinhoff, Steven Todorov, Dr. Shara Stough

Project advisor: Dr. Shara Stough, neuroscience and psychology

Impact of Social Contact on Predator-Induced Fear Responses in Young Male Chicks

Poster Session [P3] #24: Gävle Room, The Gerber Center

Post-Traumatic Stress Disorder (PTSD) is thought to involve unusually strong associative memories between the intense fear felt during a traumatic experience and other environmental cues present at the time of the trauma. Our study uses an animal model to investigate social contact, one of the factors that can impact fear responses, to learn more about possible risk factors or interventions that may be relevant to humans who may experience PTSD. Freezing, or the cessation of movement, is a common fear response observed in laboratory animals in the presence of a perceived threat. We tested whether the degree of fear expressed by a social companion impacted the level of fear demonstrated by young male chicks. We initially predicted that the presence of a companion would reduce the fear demonstrated by a chick in response to an audiovisual predator stimulus, known as social buffering of fear. Previous results in our lab actually demonstrated the opposite effect. Chicks that experienced predator stimuli in the presence of another chick remained immobile longer than those who experienced the predator alone. It seemed as though chicks were mirroring the fear expressed by their companion. The current study was aimed at investigating whether social transmission of fear is, in fact, occurring between chicks. To more carefully control the fear response of companion chicks, we created two different videos to serve as the "companion" stimuli in this experiment. In one, a control chick walked around naturally, and in another, the chick demonstrated fear that was timed to the onset of the predator stimulus. After three daily habituation sessions to the testing apparatus and video screen, 48 Cornish Cross chicks were exposed to one of four conditions: no predator stimulus and a non-fearful video companion, no predator stimulus and a fearful companion, predator stimulus and a non-fearful companion, or predator stimulus and a fearful companion. One chick from each home cage was randomly assigned to each condition. Half of the chicks were exposed to the predator stimuli and half were not. In each group, half were paired with a fearful companion video and half were paired with a non-fearful companion video. Activity of each chick was recorded and quantified by behavioral analysis software (Smart 3.0, Panlab). Statistical analysis revealed a significant main effect of the predator stimulus.

Phoebe Strell, Payton Petruhuis, Nora Bosslet, Allison Bjork

Project advisor: Dr. Daniel Cortes, neuroscience and psychology

Student-Teacher Rapport Moderates the Relationship Between Course Difficulty and Academic Dishonesty

Poster Session [P3] #25: Gävle Room, The Gerber Center

Surveys indicate around 75% of undergraduates intentionally cheat on schoolwork and, not surprisingly, there are normative beliefs among students that this figure is correlated with course difficulty (Rettinger, Jordan, & Peschiera, 2004; Rettinger & Kramer, 2009; Witherspoon, Maldonado, & Lacey, 2010). We asked whether student-teacher rapport might moderate those beliefs, hypothesizing that rapport with a teacher reduces the estimated likelihood of cheating. Researchers distributed an online survey to traditional-aged college students at a selective liberal arts college receiving 95 completed forms. Participants indicated whether they had engaged in each of 14 academically dishonest behaviors (Witherspoon, Maldonado, & Lacy, 2010), which represented classroom-based (e.g., copying test

answers) or out-of-class (e.g., plagiarism) behaviors. Independent variables were assessed by the Difficulty Appropriateness Inventory (Heckert et al., 2006) and a modified measure of student-teacher rapport and teacher immediacy (Gorham, 1988; Gorham & Christophel, 1990). Hierarchical regression showed a significant association between difficulty and out-of-class cheating ($\beta = 4.02$) that was moderated by rapport ($\beta = -4.29$) such that strong faculty-student relationships reduced the tendency to cheat, $F(3, 27) = 5.932, p < .003$, adjusted $R^2 = .330$. There was a similar moderating effect of rapport on difficulty ($\beta = -4.834$) when in-class cheating was the dependent variable $F(3, 27) = 4.79, p = .008$, adjusted $R^2 = .275$. In conclusion, these data support previous research connecting difficulty to increased academic dishonesty. In addition, the data provide new evidence that a positive experience with a teacher may prevent some of that cheating.

Ashley Adams, Courtney English, Summer Lawrence, Zachery Yakey, Erin Anusinha, Dr. Rupa Gordon

Project advisor: Dr. Rupa G. Gordon, neuroscience

Physiological Synchrony in Conversation

Poster Session [P3] #26: Gävle Room, The Gerber Center

During social interaction we tend to pick up on the behaviors of our conversational partners. This conversational synchrony helps to signal active interest and mutual understanding, and it enhances rapport (Cappella & Panalp, 1981; Garrod & Pickering, 2009; Giles et al., 1991). Research suggests that not only do overt behaviors (e.g., gestures) become more similar in conversation, but non-conscious physiological measures, such as heart rate and skin conductance response (SCR), also become similar (Marci et al., 2006). We predicted that emotional conversations would elicit stronger correlations in physiological responses between participants, indicating physiological synchrony, compared to neutral conversations. Pairs of friends first discussed a relatively neutral scenario followed by an emotional moral scenario (adapted from Koenigs et al., 2007) while SCR was recorded. To assess participants' abilities to pick up on the emotions of others, a questionnaire was used to measure trait empathy (Baron-Cohen & Wheelwright, 2004). Raters watched and assessed video recordings of the interactions for awkwardness and engagement on a scale of 1-5. We calculated SCR concordance indices for each conversation by correlating the slope of the participants' SCRs. While the pairs did show physiological synchrony that was relatively similar to previous studies (Marci et al., 2006), there was no significant difference between the emotional and neutral conversations. Interestingly, physiological synchrony was not correlated with empathy or the raters' impressions of awkwardness or engagement during the interaction. Although these results do not support our hypothesis, these results help us further understand the factors that impact physiological synchrony.

Jessica Czarnecki, Theresa Nalty

Project advisor: Dr. Heidi Storl, philosophy

Analyzing Physical and Mental Health of Orthopedic Oncology Patients Using the PROMIS Global Health Tool

Poster Session [P3] #27: Gävle Room, The Gerber Center

Discovering the influences of cancer on all elements of health has been an ongoing experimental quest for many decades. It is yet to be explored how different forms of cancer relate in health improvements after treatment, and how they can be analogous to a cure. The NIH PROMIS Global Health tool is a 10-question patient reported survey that assesses physical function, fatigue, pain, depression, anxiety, emotional stress, quality of life and social health after surgical treatment of cancer. The purpose of this study was to use this validated patient reported outcome tool to compare quality

of life based on physical and mental health for the orthopaedic oncology population. Data was collected from 60 (N=60) metastatic and non-metastatic oncology patients over the course of pre-op baseline to six months post-surgery. The results of the independent-samples t-test show a significant difference at six months for the physical T-scores between spine and pelvic/sacral tumor locations. The PROMIS Global Health tool detected an improvement in physical and mental health at six months post-operative treatment, with greater change in non-metastatic patients or pelvic/sacral patients.

Cassidy Belske

Project advisor: Dr. Jeffrey Strasser, geology

Lead Leached from Household Plumbing and the Effects of Water pH Levels

Poster Session [P3] #28: Gävle Room, The Gerber Center

The recent crisis in Flint, Mich., has raised awareness of the hazards of lead (Pb) in public water supplies. Pb has long been known to be hazardous to humans, and consumption of Pb, particularly by children, can result in irreversible damage to the nervous system. The U.S. EPA banned the use of Pb in public water systems (1986), yet many cities have aging infrastructures with Pb pipes. Moreover, many older, privately owned buildings still retain old Pb pipes. The purpose of this research is to gain a better understanding of the rates of Pb leaching from pipes in water of different temperatures and pH. Previous studies have shown that as the pH of water and the stagnation time increases, the concentration of dissolved Pb also increases, yet few controlled experiments that simulate actual conditions have been carried out. This project's controlled lab experiment consisted of Pb pipe sections immersed in water of different pH for six weeks. Of the eight experiments, four were heated to constant temperatures of 41°C-43°C, while the other four were left at room temperature (25°C). Water samples were taken at one- to two-week intervals and analyzed by XRF spectroscopy. The highest Pb concentration was 518 ppm, well in excess of the EPA limit of 0.015 ppm (15µg/L). Room temperature experiments produced Pb concentrations up to 167 ppm, while heated experiments generally resulted in higher concentrations. As expected, Pb concentrations in water were inversely proportional to pH. Although previous research has shown that as the stagnation time increases, the concentration of Pb increases, the results of these experiments were not as definitive. Of the eight experiments, only three showed a consistent increase in Pb concentrations over time, suggesting that some Pb may have actually precipitated out of solution, although there was no obvious evidence of this process. This study indicates a need for more thorough laboratory experiments to develop a better understanding of the rates of Pb dissolution under different temperature and pH conditions.

SENIOR ART SHOW GALLERY TALKS: AUGUSTANA TEACHING MUSEUM OF ART

GROUP 1: 10:30-11:30 a.m.

Henry Roderick

Project advisor: Kelvin Mason, art, graphic design

The Virtuous

SESSION I-AS-1: [10:30-11:30 a.m.]

Each of the seven figures is a well-liked religious leader from one of the five largest world religions – Christianity, Islam, Judaism, Hinduism and Buddhism. All of them are typically associated with

one of the seven virtues (chastity, temperance, charity, diligence, patience, kindness, humility). The work is a commentary on the tendency of people to blindly follow religious figures, not questioning their ideas or actions as thoroughly or actively as they should. People often blindly obey and revere religious leaders without educating themselves on what that person has actually done. This blindness can have disastrous effects: complacency, ethics compromised for wealth, preying on the poor, creation of terrorist organizations, or even genocide. Each of these figures was able to commit horrible acts or get away with an equally damnable lack of action. Even after their death, they are still considered to be great leaders because of their perceived virtue. These images are depictions of the leaders as their actions show, characterized by the vice that corresponds to the virtue with which they are usually associated (lust, gluttony, greed, sloth, wrath, envy, pride). The goal in creating grotesque caricatures of such revered leaders is to call into question the actions of people who have for so long been immune to questioning.

Jordan Peklo

Project advisor: Kelvin Mason, art

The Truth Lies Beyond the Screens

SESSION I-AS-2: [10:30-11:30 a.m.]

My mission when creating works of art is not only to evoke an emotional response, but to shed light on important issues that our country faces. In our culture today, we are surrounded by stereotypes that do not define our true characters, and the media plays a huge role in how we perceive others. I highlight those dramatic stereotypes by surrounding the figures' portraits in television frames and force the audience to realize that judging based on appearance is never okay. I dive deep into our cultural normalization and bring forth some of the most controversial topics. The portraits I paint are of anonymous people from all different backgrounds and religions. I show negative stereotypes through a Muslim woman, an American Christian man, a Mexican woman, an African American man, a Jewish woman, and a man with body modifications. Each portrait is a reflection of the most common labels that are thrown around in our world. I urge people to think with an open mind. This is my response to the ignorance that media fuels in America. The subjects are serious and intense, and I want the audience to feel the exact same way. I hope that the viewers can see, feel, and understand the importance of transparency and how building walls will divide who we think we are and who we really are. Your character matters more than who you are because of how you look.

Giselle Gaztambide

Project advisor: Rowen Schussheim-Anderson, art

Recuerditos: The Warmth of a Latin American Home

SESSION I-AS-3: [10:30-11:30 a.m.]

Ultimately, everyone has a story. Though it may be vastly different from mine, perhaps it is even similar to mine in a lot of ways. The fact of the matter is, every person has a story and every person comes from somewhere. Lineage and heritage are very important to me. With this project, I want to take you through my story—I want you to think about the sacrifices of immigrants coming to this country to make a better life for themselves and the people they love. But most importantly, I want you to think of the people that you love and think about how the decisions of your ancestors have made you who you are today. I want you to think about all the memories of laughter and tears both. I thought there would be no better way to do this than to take you into a home—my grandmother's home. The home is the center of all life. Before you is a living room inspired by my late maternal grandparents' house in that very neighborhood in Chicago—a house that I spent a good part of my childhood in. My

grandparents did not have much. But the love that they had for all of us in the family, my father included, was built into those walls and that is what made it so special. It was the loss of my maternal grandmother in November of 2016 that inspired me to use elements of her home to portray the warm feeling of family, togetherness and ultimately lineage. Rather than paint pictures of it, I decided to take you all there instead. The method in which I have chosen to display my paintings is significant—my grandmother always had countless pictures of us on the walls, however she only had one wall space to display them on, which was her very small living room. She used all of the wall space she could, putting pictures as high as the ceiling and as low as the head of the couch where my cousins and I used to watch Looney Toons together. They were always in mismatching picture frames of various sizes and styles. I chose to paint the portraits on panel, because many Renaissance paintings were painted using oils on panel and since I wanted to express the idea of ancestry and lineage I thought panel would be most appropriate. The rustic texture it provides also suits the purpose and overall look I wanted my work to have. This project is about family, it is about lineage, it is about struggle, it is about the home, but more important than anything, it is about love. I took a lot of inspiration and influence from family portrait artist Stephanie Ryan who works as an art professor at a university in California, as well as from Frieda Kahlo, who painted to make a statement about her life as well as her place as a Latin American female, like me.

Ginger Hamilton

Project advisors: Kelvin Mason and Vickie Phipps, graphic design

What Does It Take To Make You Care

SESSION I-AS-4: [10:30-11:30 a.m.]

Type has the power to resonate differently with every single person that reads it. When people read things they give it their own voice, and it means something different to each of them. It is important to not only appreciate the art of letterforms and how different letters work with one another, but also how letterforms can simply be the art form. After learning the basics of letterforms through Calligraphy, I began experimenting with letters in an abstract form. I wanted to see how much I could get away with. How far can I push the letterform to where it is still a letter but has more of an abstract value? My focus is to create words and letters (and ultimately my message) as an art form, and make a statement about passions in life, forcing people to think about what they are passionate about. I have realized that I am passionate about being passionate about what you are doing. If you don't truly love something, what is the point of doing it? Can you grow to love something again that you once did? I want everyone to truly think about what it takes to make them care.

GROUP 2: 11:45 a.m.-12:45 p.m.

Emily Grooms

Project advisor: Kelvin Mason, art

Coping with Death

SESSION II-AS-1: [11:45 a.m.-12:45 p.m.]

Everyone copes with death differently, and each coping style can vary significantly. While one person may feel an enormous amount of pain, another might embrace the concept of death with acceptance. Some of the more intense and negative coping styles may develop into a deeper issue, and may jeopardize someone's mental health, and ultimately, their life. This series touches on multiple different coping styles associated with the grieving process, societal expectations of grief, and the impact death could potentially have on a person's health.

Olivia Havens

Project advisors: Kelvin Mason and Rowen Schussheim-Anderson, art

Understanding Diversity in a Woven Form

SESSION II-AS-2: [11:45 a.m.-12:45 p.m.]

These works reflect social challenges and make reference to the abundance of racial tension that underlies most public debates of this time. They acknowledge diversity and promote acceptance of cultural ethnicities. By weaving together similarities across cultures, we can overcome those ever-so-common discriminations found in the present day.

McKee Jackson

Project advisors: Claire Kovacs, Kelvin Mason and David Schrieffer, art

Femme Unity

SESSION II-AS-3: [11:45 a.m.-12:45 p.m.]

The purpose of human nature is to connect with people, whether it's through dialogue, body language, glances from afar, or just in thought. There are 7 billion people on this earth, and in that mass, we have these attachments with the people around us. It can be difficult to map how we got to a particular place in the relationships we form, but there is meaning and emotion in the journey. Some of those relationships have more of an impact on us and leave a lasting impression, and sometimes we are less aware of the influences. We are touched by so many people on a regular basis; it can be overwhelming to keep track of and understand yourself in the middle of it. While it may be overwhelming, it is also inspiring. My paintings are a representation of those connections and how we make sense of the world around us. I feel the strongest when I am surrounded by women. Females are everyone's foundation as mothers, daughters, educators, best friends, sisters, teammates and confidants. Here I've mapped my life using texture, color and pattern. It has been a vibrant, emotional and empowering journey, and by navigating my way through the women in my life, I have found myself.

Jorge Ambriz

Project advisor: Kelvin Mason, graphic design

La Fama y La Gloria

SESSION II-AS-4: [11:45 a.m.-12:45 p.m.]

Often, as spectators we hold artists to constant unreal standards that also cause us to develop separate perceptions or images of those artists based on said expectations. Many times this "perception" doesn't go unnoticed and often leads artist to constantly lose themselves while attempting to stay relevant in a constant innovative world. My objective with this installation is to mirror a few of the stages that Mexican Pop Icon Gloria Trevi underwent while pursuing fame, in hopes to show the isolated transformation that artists often face on the various paths to stardom. I had two major inspirations for this project. One, Mexican Pop icon Gloria Trevi, whose controversial career took her many places, including jail. Yet once liberated she continued her career and is active in the music industry to this day, just under a different image than the one that she started with. And two, the David Bowie tribute performed by Lady Gaga at the 2016 Grammys. It was during this performance that projection mapping really caught my eye. Projection Mapping uses regular video projectors, but instead of projecting onto a regular flat screen, the projection is mapped onto any surface, turning common objects of any 3D shape into interactive displays.

GROUP 3: 1-2 p.m.

Paris Edwards

Project advisor: Kelvin Mason, graphic design

For the Love of Black

SESSION III-AS-1: [1-2 p.m.]

I want to change the perception of how the color black is portrayed. The color itself has been seen as something unhappy and negative. I want to reverse that thought process while also challenging others to reverse their thought process when they receive "bad news." The color black does not have to represent evil, bad luck or death. Just like cancer patients' diagnoses does not mean they will die, instead it should be used as a battle cry. Throughout the United States colors and diagnoses are given labels to try and encourage the way people think. This design is not about race. This is about appreciating a color that has been treated as something that is unhealthy. This logo represents the beauty of the color black wrapped with white rose vines as a defense mechanism. The combination of the color white and black is needed, because a color that stands alone can be seen as bland, but with other colors deepness can be shown. The logo is iron printed on the front of the shirts and hats to show appreciation of this dark color, along with a different slogan on the back of each shirt to help spread the awareness and motivation that this brand represents. I will have a few shirts hung on the wall right next to the screen where my logo will be shown to the audience. Some volunteers will join me in wearing my design as I present my concept to the audience.

Emily Johnson

Project advisor: Kelvin Mason, graphic design

Is There No Balm In Gilead?

SESSION III-AS-2: [1-2 p.m.]

When in conversation with a stranger, topics can range from the Olympics to "Did you hear Prince died?" We as a nation are vaguely familiar with what is going on in the world because of social media, the news, and word of mouth. The small talk, the religious views, and the entertainment is what holds us together. We all may be vastly different but we cannot deny a sense of unity when we come together to discuss what is going on in OUR world. A world that we SHARE. I would be so bold to say that if our "society" were a puzzle there would be a missing piece. For the most part, this nation is blessed to have access to water and food sources. However, spiritually we are dying of hunger and thirst. In Jeremiah 8:22, the prophet asks the people of a city who is known for its healing balm, "Is there no balm in Gilead?" What he is saying is "how can a city who is known for healing be knocking on death's door?" So I am asking, how can we as a "developed country" be so spiritually hungry and desperate for God and not even know that we are? Why is there so much hatred, division, racism and judgment, you ask? Because people do not truly have a revelation of the Love of God who robed himself in flesh and died for each and every person, the love of God does not discriminate.

Glen Williamson

Project advisor: Kelvin Mason, graphic design

A Moment in Time, A Personal Reflection in Drawing

SESSION III-AS-3: [1-2 p.m.]

I enjoy challenges and the opportunity to try different types of artwork. Some of my past media have been ceramics, painting and sculpting. My art is an extension of who I am and sometimes is based on experiences and moments within my own life. It is also an

escape, a chance to get away from the business of life and create something that could be looked back on and remembered as a point in time. The pieces presented here, "A Moment in Time," are drawings in white charcoal on black Strathmore paper. They are of my daughter Allee, my son Brandon and his wife Emilie. These drawings represent my family, which is one of the most important things in my life. The drawings are a celebration of life and love. It is my heart expressed on paper. One of the beauties of art is that I have unlimited boundaries of learning and perfecting whatever I choose to do. There will always be room to learn something new, and continually become better at my art.

Chloe Gale

Project advisor: Kelvin Mason, art

Reflecting on Relationships and Creating Identities with Color and Brushstroke

SESSION III-AS-4: [1-2 p.m.]

While everyone who goes to college goes to get a degree, I have found in these last four years that the people I have met have taught me more about life than any education ever could. The choices that are made in these pivotal four years can determine one's future and the type of person you become. These women of the Delta Chi Theta sorority, some of the strongest and most driven individuals, are just a small selection of a group that shaped who I am today. This series is a reflection of the relationships I have built during my time at Augustana College. In these relationships, I believe that the closer I am to a person, the less their visual becomes important. If I have come to know someone really well, only a small part of their portrait may be completed, because it is no longer how I identify them. Each portrait is combined with an abstract representation of my memories with them and the energy that this person gives me. Each detail, from color to brushstroke, creates an identity.

ORAL PRESENTATIONS AND PERFORMANCES

10:30 a.m.–3:15 p.m.

Olin Auditorium (Featured Presentations I, II, III)

A–Hanson 102

B–Hanson 304

C–Hanson 305

D–Olin 305

E–Old Main 132

F–Old Main 21 & 28

G–Evald 17 & 18

H–Bergendoff, Larson Hall

I–Augustana Teaching Museum of Art

J–Honkamp Myhre Black Box

K–Brunner Theatre Center, Wilson Center

L–Library, 2nd (Main) Floor

M–Outside (areas of the Quad; near the Gazebo)

Note: There are multiple concurrent presentations during each one-hour time block. It is expected that presenters sharing a given time and room will divide the available time evenly (e.g., four presenters each have 15 minutes total for delivering their presentation and

answering questions). Presenters appear in the order expected during the hour. Those attending a session will be expected to attend **for the full hour** rather than entering/exiting between presenters. This will minimize disruption and time between presenters. Moderators for each session will be tasked with keeping speakers on time and, if necessary, interrupting a presentation if it is running long to allow time for all presenters.

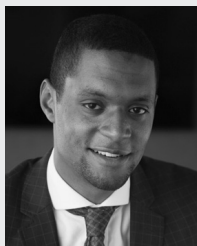
SESSION I 10:30-11:30 a.m.

FEATURED ALUMNI PRESENTATION [OLIN AUDITORIUM] 10:30-11:30 a.m.

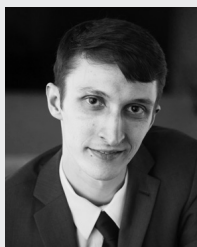
Ken Clay '14, Stuart Casarotto '14 and Mark Hoffman '15

"So I've got this idea..."

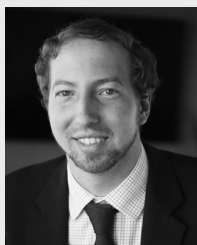
You can have the greatest idea in history but unless you have the grit, persistence, perseverance and determination to see you it through, you don't have anything. Hear from 38th Street Studios' founders and Augustana alumni as they discuss the realities of starting a business with real-life stories of the grind. 38th Street Studios is a technology solutions firm developing customizable data-driven business tools. Understanding that state-of-the-art means continual improvement, this highly specialized, elite team looks to work with clients who strive to move their organizations to the next level of success. Its mission is to deliver on that goal by offering business solutions, developed using the client's data and domain expertise. The solutions are used to predict future outcomes in both revenue production and cost containment. 38th Street Studios focuses on building long-term relationships with its clients by assisting them in achieving and maintaining state-of-the-art business tools well into the future.



Ken Clay '14 – As the CEO of 38th Street Studios and an entrepreneur at heart, Ken Clay oversees all of the day-to-day operations, contract negotiations, client relations, brand management and developmental efforts. His track record for developing businesses and cultivating deep, meaningful relationships with clients continues to be at the forefront of 38th Street Studios' agenda.



Stuart Casarotto '14 – As VP of Operations, Stuart Casarotto oversees all company operations, focusing on strategic planning and goal setting in support of 38th Street Studios' missions. Additionally, Casarotto acts as the primary front-end developer, working closely with 38th Street Studios' creative director, to develop high-quality User Interface.



Mark Hoffmann '15 – As the VP of Analytics, Mark Hoffman is in charge of managing the data pipelines from internal projects, as well as leading all modeling operations. Utilizing statistical models, machine learning algorithms and dashboards, Hoffmann works to help our clients make data-driven decisions, as well as fine-tune internal project efficiencies.

SESSION I-A [HANSON 102] 10:30-11:30 a.m.

Sam Dunklau

Project advisors: Dr. Carolyn Yaschur and Dr. David Schwartz, multimedia journalism and mass communication

Sexual Assault at Augustana: A Journalistic Compendium

SESSION I-A-1: Hanson 102 [10:30-10:50 a.m.]

Sexual assault on college campuses has been a hot-button issue nationwide. Recent statistics say about one in five students will be sexually assaulted while attending college. In response, both college officials and student groups have sought to improve how sexual assault cases are handled and how to prevent it from happening. This video presentation, the feature of my Senior Inquiry journalistic compendium, looks at this issue through the lens of Augustana College. It tells the stories of affected students, administrators and other experts who, together, are seeking to better inform Augustana's campus community about sexual assault.

LuAnna Gerdemann, Ryan Jenkins, Madison Rodgers

Project advisors: Dr. Carolyn Yaschur and Dr. David Schwartz, multimedia journalism and mass communication

Professional Journalism vs. Student Media During the 2017 Presidential Inaugural Festivities: A Comparative Analysis

SESSION I-A-2: Hanson 102 [10:50-11:10 a.m.]

This comparative analysis builds on the study "Shooting the Shooter: How Experience Level Affects Photojournalistic Coverage of a Breaking News Event" (Yaschur, 2012). During our trip to Washington, D.C., we interviewed professional journalists/photojournalists to compare their experience covering a national event to our own experience as student journalists/photojournalists.

Melissa Coons, Emily Geison, Allison Ackerman

Project advisor: Dr. Jayne Rose, psychology and public health

Stories from Guatemala

SESSION I-A-3: Hanson 102 [11:10-11:30 a.m.]

One of the main themes from our trip to Guatemala was a sense of openness and willingness. We met wonderful communities and organizations that had a desire to share their stories and teach us, and to learn from us as well. Every organization and community we met with showed interest in us, but one of the biggest was the community of Santa Catarina. Our meeting gave us an opportunity to learn from them and take that openness home with us. While we were in Guatemala, we were able to see their culture with open eyes. Guatemala is an extremely impoverished country with most of its wealth in a few families. Although civil war and droughts have affected the economy of Guatemala, we could see that the people are rich in other aspects besides money. In all of the lives we touched during our journey, it was clear that even if the individuals did not have a lot of money, they had family, love and the work ethic to keep pushing every day. We want to share what we have learned, seen and experienced in Guatemala to the students at Augustana College.

SESSION I-C [HANSON 305] 10:30-11:30 a.m.

Adam Lydigsen-Grimes

Project advisor: Dr. Patrick Crawford, biochemistry

Inhibition of the LINGO-1 protein causes remyelination of neurons as a treatment for Multiple Sclerosis

SESSION I-C-1, 2: Hanson 305 [10:30-11 a.m.]

Multiple Sclerosis (MS) is a neurodegenerative disease that is caused when immune cells attack the protective covering around neurons called the myelin sheath and causes the disruption of nerve impulses. This results in the person losing mobility over time. Researchers in the past have focused on the development of immunological treatments for the disease to stop the demyelination; however, recent neurological studies have shown that LINGO-1 or Leucine-rich and Immunoglobulin domain-containing, Nogo receptor interacting protein found in neural cells and part of the Nogo receptor protein signaling complex, inhibits the process of remyelination. It also has been found that the expression of LINGO-1 increases as there is more neuron damage in the brain, which correlates why the body isn't able to heal the damaged neurons normally. To study this phenomenon, scientists have been using antibodies such as Li81 as inhibitors to bind to LINGO-1 and change its shape to prevent it from interacting on this complex in neurons. By inhibiting LINGO-1, its protein activity decreases and allows an increase in remyelination of neurons to occur. Researchers have not yet figured out why LINGO-1 is expressed in these conditions; however, by being able to inhibit this protein effectively, scientists can further understand the mechanism of this cellular signaling complex and synthesize new drugs in the future that can help promote remyelination of neurons and allow MS patients to regain mobility.

Griffin Welfer

Project advisor: Dr. Patrick Crawford, biochemistry

CHEM 451 Presentation on DJ-1 Proteins

SESSION I-C-3, 4: Hanson 305 [11-11:30 a.m.]

This presentation covers structure and function studies of the DJ-1 superfamily of proteins that help cells manage oxidative stress, as well as how nonfunctional DJ-1 proteins are linked to Parkinson's disease and various cancers.

SESSION I-D [OLIN 305] 10:30-11:30 a.m.

Kyle Zeberlein

Project advisor: Dr. Tom Bengtson, applied mathematics and engineering physics

Modeling Building with Fantasy Football Quarterbacks

SESSION I-D-1: Olin 305 [10:30-10:45 a.m.]

We will present a system for predicting fantasy football points scored by quarterbacks who have started 48 or more games in the National Football League based on four independent variables, using statistics from the 2015 NFL season. These variables are the quarterback's previous season, the quarterback's career performance against a given team, the quarterback's career performance excluding the previous season, and the defense's average fantasy points allowed to quarterbacks in the previous season. We then used model building techniques to create a new model that will more accurately predict the quarterback's fantasy performance for a given game.

William Stowe

Project advisor: Dr. Tom Bengtson, mathematics

A Recurrence Formula for Spreads

SESSION I-D-2: Olin 305 [10:45-11 a.m.]

A spread is a set of points such that no three are collinear. We will prove that every spread has a convex hull that surrounds all other points. If we take the points in the spread, but not in the convex hull, this set of points is also a spread, and thus has a convex hull. The list of the orders of these convex hulls make up the genus of the spread. We prove that there is a recurrence formula for the number of genres a spread of order n can take. This recursion is closely related to the Fibonacci Sequence. We show that the m -th term divided by the $(m-1)$ -th term approaches a constant, and that this constant can be written as a continued fraction.

Myles Wallin

Project advisor: Dr. Tom Bengtson, applied mathematics

Productivity of Quarterbacks in the NFL

SESSION I-D-3, 4: Olin 305 [11-11:30 a.m.]

Quarterbacks have always been known as the top paid players in the NFL. People believe that the quarterback impacts a success of an NFL franchise. I have found data that shows if a quarterback does or does not impact their franchise. I used fantasy football points as a way to measure productivity for quarterbacks, and I used winning percentage for the franchises. I created separate graphs for all 32 teams and then one graph that includes all the information from all 32 teams. Using the statistics of linear regression, I compared the information from the different graphs to show that quarterbacks do indeed impact the success of a franchise.

SESSION I-H [BERGENDOFF, LARSON HALL] 10:30-11:30 a.m.

Omar Medina

Project advisor: Dr. Chris Marmé, business administration

Understanding Basic Finance Principles after College

SESSION I-H-1: Bergendoff, Larson Hall [10:30-10:45 a.m.]

This presentation's overall goal is to inform students about basic finance principles after graduation. The key points are the following: understanding student loans, spending/saving habits, the importance of starting to save early (retirement), insurance/investment personally and through an employer. Students hopefully will have a better understanding of how to prepare their financial situation for the "real world" after college.

Trang Le, Dr. Sheila Goins

Project advisor: Dr. Sheila Goins, business administration

Informed but Overconfident? The Impact of Forecast Preparation on Trading Behaviors

SESSION I-H-2: Bergendoff, Larson Hall [10:45-11 a.m.]

Our parents and teachers usually indoctrinate us to do our homework since by doing so, we usually perform better. However, it is not always the case in financial markets. Why not? In a financial market, "doing homework" can range from gathering information about the product, assessing risks and the correspondent returns, and generating a forecast. The payoff from generating a forecast depends upon the accuracy of the forecast. Doing homework is likely to lead to overconfidence, which makes you engage in risky trading behaviors. If your forecast is correct, this additional risk will generate a profitable result. However, if your forecast is wrong, the increased risk will lead to losses. In this study, we examine how

generating a forecast affects trading decisions, using an online futures market. The Iowa Electronic Market (IEM) is an internet-based electronic futures market where traders buy and sell contracts that predict a future event—in this case, the four-week box office receipts for a forthcoming movie. Payoffs are determined by holding the winning contract at the end of the four weeks plus any gains from selling contracts during trading. The research involves two groups of traders: one group is required to write a forecast prior to trading and the other group is not. We expected our analysis to demonstrate that generating a forecast prior to trading produces evidence of overconfidence (concentrated portfolios and frequent trading). We also expected to find the highest returns for those with correct forecasts and the lowest returns for those with incorrect forecasts. Our unique trader level data enables us to see how individual forecasts get incorporated into market prices. Our findings do not suggest that individual investors trade blindly. However, we illustrate the need to increase awareness about overconfidence and overly risky trading behavior.

Phuong Nguyen, Dr. Sheila Goins

Project advisor: Dr. Sheila Goins, business administration

One Hundred Dollars Now or a Half Million Dollars Later?

SESSION I-H-3: Bergendoff, Larson Hall [11-11:15 a.m.]

Most people do not think about retirement savings early enough and miss years of compound interest earnings. According to Investopedia, the average 55- to 64-year-old American has approximately \$104,000 in retirement savings, which translates into \$310 income per month. The prospect of millions of seniors living well below the poverty level is not ideal. The purpose of our study is to determine if different methods of envisioning the future can prompt millennials to increase their savings early in life. Land-use management experts use a “backcasting” approach to generate future scenarios that enable planners to easily identify strategies to achieve those goals. Both land-use management and retirement planning require tradeoffs between short-term sacrifices and long-term gains. For example, using forecasting, we focus on saving \$25 per month and determine what our savings will be in the future. Using backcasting, we determine what income we want in the future, then calculate how much we have to save each month to achieve that goal. We hypothesize that backcasting will result in higher savings than forecasting. In our experiment, we presented a scenario to prompt subjects into a forecasting or backcasting mode. They were then asked to save a portion of their participation fee. One week later, the same subjects repeated the experiment in the other mode and again were asked to save a portion of their participation fee. The study highlights the cognitive processes involved in time-dependent decisions. We also will recommend strategies to improve the retirement financial independence of millennials by illustrating ways to encourage them to start saving while they are young.

Camilo Duarte

Project advisor: Dr. Mark Salisbury, institutional research

Heywire: Behind the Scenes

SESSION I-H-4: Bergendoff, Larson Hall [11:15-11:30 a.m.]

We will discuss what it takes to run a student organization, and how it all comes together. Everything from training new members to performing and marketing will be discussed; but fret not, as we will make sure to entertain and keep everyone engaged. If you are required to go to a Celebration of Learning session for class, this is a great way to fill that requirement as improvisation applies to all.

SESSION I-J [BRUNNER THEATRE CENTER, HONKAMP MYHRE BLACK BOX] 10:30-11:30 a.m.

Elena Leith

Project advisor: Dr. Jane Simonsen, women’s and gender studies

Feminist Protagonists and the Future of Feminism: Analysis of Legend, Hunger Games, and Divergent

SESSION I-J-1: Brunner Theatre Center, Honkamp Myhre Black Box [10:30-10:50 a.m.]

What do young readers learn from characters like Katniss, June and Tris? How does feminism evolve from the actions of these models? This project discusses these major protagonists and how feminist ideals have been interpreted as well as dismissed in popular young adult dystopian literature. The development of feminist morals in these novels lend context to the growth of fourth-wave feminism and the lack of intersectionality in past feminist movements.

Evan Marzahn

Project advisor: Dr. Jane Simonsen, women’s and gender studies

Don’t You Have Anything Better To Do? Care Ethics in Undertale

SESSION I-J-2: Brunner Theatre Center, Honkamp Myhre Black Box [10:50-11:10 a.m.]

This presentation explores the feminist ethic of care in Undertale’s meta-narrative and gameplay.

Rachael Meadors

Project advisor: Dr. Jane Simonsen, women’s and gender studies

The Importance of Diversity in Intentional Communities

SESSION I-J-3: Brunner Theatre Center, Honkamp Myhre Black Box [11:10-11:30 a.m.]

Intentional communities have long been places designed to be sites of healing. By breaking away and becoming separate from society, these communities are able to foster growth, personal values and intentionality. The ability to partake in these communities is something that belongs to people who are privileged to a degree. As a result, the population of intentional communities has the tendency to be homogenous. I explore the current limitations and barriers to access (especially for marginalized people). I continue on to explore how to best build a diverse, inclusive community. Drawing on leaders who have excelled in community building and social justice, I have found a variety of models and methods that result in accessible communities. This research will help transform communities and give marginalized groups such as women, people of color and LGBTQIA+ the ability to access and thrive in intentional communities that will sustain and elevate their emotional health and belongingness.

SESSION I-H [LIBRARY 2ND (MAIN) FLOOR] 10:30-11:30 a.m.

Dr. Brian Leech, members of History 320: Public History Course

Project advisor: Dr. Brian Leech, history

Augustana’s Lost Museum

SESSION I-L: Library 2nd (Main) Floor [10:30-11:30 a.m.]

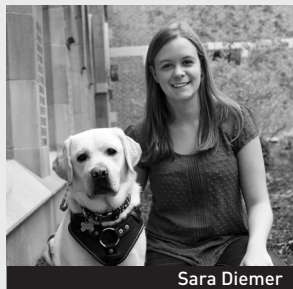
The Augustana Historical Society holds a large collection of artifacts; yet, few students, faculty or staff know anything about them. What once was a fairly well-traveled museum is now largely hidden from view. This pop-up museum exhibition will feature many of these

objects as a way to tell the broader Augustana community more about this lost museum, the college's fascinating history and many items once used by Swedish immigrants to our area. Students in History 320: Public History will be on hand to tell visitors about these tangible reminders of our past.

SESSION II 11:45 a.m.-12:45 p.m.

FEATURED STUDENT PRESENTATION [OLIN AUDITORIUM]

11:45-a.m.-12:45 p.m.



Sara Diemer

Sara Diemer, Ali Kerr, Samantha Pacha and various Viking Pups handlers

Viking Pups: Pups, People, and Passion

What does it mean to be a part of Viking Pups? Why are our handlers so invested in the club? Is this just a club or has it shaped our futures? Hear the stories of the dogs, handlers and clients to get a glimpse into what it means to be a part of Viking Pups!



Ali Kerr



Samantha Pacha

SESSION II-A [HANSON 102] 11:45 a.m.-12:45 p.m.

Debo Balogun

Project advisor: Jeff Coussens, theatre arts

A Survivor Story: Othello's Past, Present, and Future

SESSION II-A-1, 2: Hanson 102 [11:45-12:15 p.m.]

An exploration of the holistic process of piecing together and portraying one of Shakespeare's most complicated characters by analyzing the breadth of human existence on a continuum. This character study of Othello within a modern context utilizes knowledge of psychology, world history and dramaturgy.

Debo Balogun

An Elephant Never Forgets

SESSION II-A-3, 4: Hanson 102 [12:15-12:45 p.m.]

Debo Balogun, first-time director and producer, reflects on a year-long journey that started in May of 2016 with the founding of The Elephant Project, an independent theatre initiative currently based in the Quad Cities. With a production team composed entirely of young theatre artists, The Elephant Project has raised nearly \$3,000 through crowdfunding alone for its production of George Brant's drama: "Elephant's Graveyard."

SESSION II-B [HANSON 304] 11:45 a.m.-12:45 p.m.

Luke Robinson

Project advisor: Dr. Heidi Storl, philosophy

Implementing Shared Decision-Making Visits in a Lung Cancer Screening Program

SESSION II-B-1: Hanson 304 [11:45 a.m.-noon]

Lung cancer is the leading cause of cancer deaths in the United States. The disease is especially dangerous because of the difficulty of making an early diagnosis. Because of this difficulty, low dose computed tomography (LDCT) screening is used to detect the disease early in high-risk patients. However, the decision to undergo lung cancer screening is still a complex one due to the associated risks. A team of researchers at MD Anderson Cancer Center have developed a decision aid to be used as a part of a shared decision-making visit between a doctor and a patient before the patient chooses whether to undergo screening. In this project, I compare pre- and post-implementation time and motion data in lung cancer screening visits to gauge efficacy and feasibility of a shared decision-making visit.

Ali Rabeah, Dr. Matthew Baker

Project advisor: Dr. Matthew Baker, applied mathematics and engineering physics

Cryo-EM Imaging of Protein

SESSION II-B-2: Hanson 304 [noon-12:15 p.m.]

Cryo-EM modeling has been gaining popularity for being a powerful tool in structural biology. Unlike crystallography techniques, cryo-EM enables the observation of proteins in their native nature state and at high resolution, without the need of large quantities of the studied specimen. After constructing a 3D map of the specimen, modeling of the specimen is then possible with the help of several cryo-EM modeling tools like Gorgon, Coot and Phenix. These modeling tools enable us to produce a full atomic refined model of the specimen, which enables us to see the secondary structures of the specimen such as alpha helices, beta sheets and loop regions. After determining the 3D structure of the specimens, the study of its chemical and functional properties becomes possible. The aim of my research was to model a certain protein called VP3A, which is part of the Mud Crab Reovirus (MCRV) and which was imaged at $\sim 3\text{\AA}$. I also created a tool for a program used for visualization and analysis of molecular structures called Chimera. This tool, coded using Python interface, is called ("PathWalking") and enables the user to create an initial path of the map by interacting with EMAN2/Pathwalker through a terminal command line.

Alex Ahmann

Project advisor: Dr. Heidi Storl, philosophy

Endoplasmic Reticulum Ca²⁺ Signaling in Rotavirus Replication and Viroplasm Formation

SESSION II-B-3: Hanson 304 [12:15-12:30 p.m.]

Increased cytosolic calcium serves as an important signal in rotavirus replication and maturation of viroplasms. This rise in calcium levels is achieved by non-structural protein 4 (NSP4), which acts as a viroporin, depleting the endoplasmic reticulum (ER). In this study, a genetically encoded calcium indicator (GECI) targeted to the ER was employed to investigate calcium signals during rotavirus infection, and viroplasm formation on a single cellular level. Long-term live cell imaging was utilized for characterization of calcium loss. Results have indicated significant, dynamic decrease in ER

calcium stores. In addition, GEC1 fluorescence was detected in membrane bound vesicles which materialize one to two hours after initial calcium drops. Western blot analysis, immunofluorescence and confocal microscopy display that these vesicles are viroplasm. These results indicate that ER calcium release is not a simple leak caused by NSP4, but rather a dynamic depletion marked by many substantial drops. Furthermore, viroplasm are surrounded by ER membranes, and formation arises one to two hours after initiation of ER calcium spikes. These findings may play an important role in rotavirus maturation and replication processes.

Austin Anderson

Project advisor: Dr. Heidi Storl, philosophy

Oncolytic Adenovirus Delta-24-RGDOX Expressing Immune Co-Stimulator OX40 Ligand Induces Effective Melanoma Immunotherapy in Mice

SESSION II-B-4: Hanson 304 [12:30-12:45 p.m.]

Oncolytic viruses selectively replicate within and lyse cancer cells while avoiding damage to normal cells. Oncolytic viruses also have displayed the ability to induce anti-tumor immune responses. We constructed Delta-24-RGDOX40L ($\Delta 24$ -RGDOX), an oncolytic adenovirus that expresses the immune co-stimulator OX40 ligand, to enhance the antigen-presenting function of the cancer cells. We hypothesized that the $\Delta 24$ -RGDOX adenovirus treatment would increase T cell infiltration within the tumor and consecutively lead to effective tumor immunotherapy. We tested the hypothesis in a B16F10-Red-Fluc-C57BL/6 mouse melanoma model. The virus efficiently infected the melanoma cells, which was indicated by E1A expression within the melanoma with intratumoral viral injection. Compared to the treatment with PBS, $\Delta 24$ -RGDOX injection induced higher levels of T cell infiltration within the injected tumor. PBS injection had a mean of only 1.58 CD3+, 0.667 CD4+, and 0.917 CD8+ T cells per high-power field, while $\Delta 24$ -RGDOX injection had a mean of 36.54 CD3+, 14.75 CD4+ and 16.08 CD8+ T cells per high power field. These results suggest that $\Delta 24$ -RGDOX treatment transforms the tumor microenvironment from immune suppressive to immune active. Importantly, $\Delta 24$ -RGDOX mediated regression of both the injected and uninjected distant tumors whose growth was monitored with bioluminescence imaging, and consequently prolonged the survival of the melanoma-bearing mice (survival: 40% versus 0%; median: 39 versus 27.5 days). Collectively, our data demonstrates that $\Delta 24$ -RGDOX induces effective melanoma immunotherapy in mice, indicating this strategy may be an option for patients with metastasized melanomas.

SESSION II-C [HANSON 305] 11:45 a.m.-12:45 p.m.

Bennett Tomlin

Project advisor: Dr. Patrick Crawford, chemistry

Mechanisms of Resveratrol Action and Implications for Health

SESSION II-C-1, 2: Hanson 305 [11:45 a.m.-12:15 p.m.]

An analysis of the mechanisms of action of the antioxidant polyphenol resveratrol and the implications for human health.

Robert (R.J.) Nicholas

Project advisor: Dr. José Boquin, chemistry

Environmentally Friendly Approach to Organic Synthesis

SESSION II-C-3: Hanson 305 [12:15-12:30 p.m.]

There are several methods to achieve halogenation with organic molecules. Most synthetic routes involve the use of harmful chemicals that are dangerous to the environment and the

experimenter's health. By changing the solvent system, we were able to minimize these risks while achieving successful halogenation. Our continuing research is to optimize this reaction by maximizing the conversion ratio between starting materials and products in the least amount of time.

Hussam Ibrahim

Project advisor: Dr. Francois St-Pierre, physics and applied mathematics

Automated Microscopy Platform for High-Throughput Analysis of Cellular Characteristics

SESSION II-C-4: Hanson 305 [12:30-12:45 p.m.]

Existing microscopy platforms allow analysis post-hoc, but not in real time. This is an issue in the world of bioengineering because you are limited to performing further analysis on the specimen. The aim of my research was to design a sophisticated system whereby information can be exchanged between the software that acquires images and the software that analyzes the images immediately after acquisition. In this system, images would be acquired by the microscope and analyzed by customized scripts (MATLAB, Mathworks) in real time. Specifically, MATLAB would wait for new images to be saved on the hard drive, import these images and perform image segmentation—that is, identify individual cells. This system would be essential for many applications; rare cancer cells could be further monitored or perturbed ontogenetically. Moreover, a fluorescent protein can be further examined based on brightness and photostability as a proof-of-principle that you can image multiple modalities and can distinguish, at a single-cell level, between cells that express different fluorescent proteins.

SESSION II-D [OLIN 305] 11:45 a.m.-12:45 p.m.

Lan Dang, Dat Tran

Project advisor: Dr. Andrew Sward, applied mathematics

The Skyrim Problem

SESSION II-D-1, 2: Olin 305 [11:45 a.m.-12:15 p.m.]

In the game of Skyrim, players collect herbs that can be mixed together to form potions. There are 93 different herbs, each herb has four traits from a list of 56 total traits. The traits are initially hidden from the player. The player may mix two or three herbs together to try and form a potion. A potion is created if two or more herbs share a common trait(s). All traits that herbs have in common are revealed on the corresponding herbs. The question becomes: How many mixes will it take to reveal all the traits on all of the herbs? To answer the question, we turn this problem into an integer linear program and explore its structure. We also discuss and implement a general greedy probabilistic algorithm to solve the problem for the list of 93 herbs in the original game of Skyrim.

Vecna, Dr. Andrew Sward, Dr. Forrest Stonedahl

Project advisors: Dr. Andrew Sward and Dr. Forrest Stonedahl; applied mathematics, computer science and mathematics

Data Embedding in the Bitcoin Blockchain

SESSION II-D-3, 4: Olin 305 [12:15-12:45 p.m.]

This presentation is on research by Dr. Sward, Dr. Stonedahl and Vecna on how data can be stored (permanently) in Bitcoin's underlying data structure, its blockchain. The presentation will briefly discuss Bitcoin and how it works before focusing on the script-based language used to make Bitcoin transactions and how different scripts can be used to store data permanently in the blockchain.

**SESSION II-E [OLD MAIN 132]
11:45 a.m.-12:45 p.m.**

Jordan Brown

Project advisor: Dr. Roman Bonzon, philosophy

For I Love You, O Eternity!: A Critique of Friedrich Nietzsche's Eternal Recurrence

SESSION II-E-1: Old Main 132 [11:45 a.m.-12:05 p.m.]

The 19th-century philosopher Friedrich Nietzsche has influenced many fields of study, including psychology, theology and political science, namely because of the profound way that he both writes and sees the world. One theory that Nietzsche delves into deeply is his idea of eternal recurrence, or the idea that time itself will repeat forever; each event happens in the same sequence, with the exact moments following one right after the other as it has done an infinite number of times and will do so into the future as well. Nietzsche says this knowledge is the "heaviest weight" and people will either accept this eternal recurrence, or choose to remain blind. However, when looking at this idea in context with the remainder of Nietzsche's philosophy, we notice certain inconsistencies. In this presentation, I will show how his theory of time is inconsistent with parts of his moral philosophy. Using textual evidence, I will suppose its truth to show how it creates logical inconsistencies with his theories of free will, his so-called übermensch and his famous mantra "God is dead."

Biniam Anberber

Project advisor: Dr. Roman Bonzon, philosophy

Friedrich Nietzsche: The Harmony Between Men and Women

SESSION II-E-2: Old Main 132 [12:05-12:25 p.m.]

Throughout his works, Friedrich Nietzsche gave his accounts on the differences between men and women. While many of Nietzsche's readers are quick to disapprove of his explanations, we should take a more meaningful and deeper approach by reading between the lines, so to speak. Taken out of context, his ideas may appear derogatory and sexist, but when viewed objectively and in the context of his complete philosophy, they offer an interesting perspective on the world. I will argue that Nietzsche is teaching us readers a powerful lesson regarding the harmony of men and women through the use of his concept of appropriate distance.

Ethan Higginbotham

Project advisor: Dr. Roman Bonzon, philosophy

The Genealogy of Suffering

SESSION II-E-3: Old Main 132 [12:25-12:45 p.m.]

Central to Friedrich Nietzsche's philosophy is the belief in what is known as the "wisdom of Silenus." This is the claim that the best thing for a human being is never to have been born, and the next best thing is to die quickly. The implication is that human life is full of unremitting misery and suffering. We have found many ways to fight this "wisdom" at various times in the past, including through Greek tragedy and Christianity, but it was not until very recently that we found a way to kill suffering altogether—with the advent of modern medicine. This is not something to be celebrated however, because without suffering, we can no longer experience the greatness that was once possible. In this presentation, I will explain the kind of suffering and greatness that we can no longer experience, how we were able to kill suffering itself, and what this means for us.

**SESSION II-F [OLD MAIN 28 & 21]
11:45 a.m.-12:45 p.m.**

Devyn Absher, Trevor Allbert, Aliyah Bailey, Eddie Beckom, Shelby Burroughs, Benjamin Corona, Kalyn Engel, Amanda Esparza Estrada, Jack Fan, Atticus Garrison, Kayla Gasper, Giselle Gaztambide, Sydney Gilbert, Julia Harris, Jacob Herman, Riley Kenning, Sarah Reese, Abigail Rogers, Amanda Schar, Ashley Shropshire, Isabel Vallejo, Buck Webb, Matthew Zimmerman

Project advisor: Dr. Eric Stewart, religion

Museums of Masculinity

SESSION II-F: Old Main 28 & 21 [11:45 a.m.-12:45 p.m.]

Students from WGST 302: Masculinity in American Culture will provide audio-visual presentations related to the various ways masculinity is performed, displayed and recognized in various pop culture media.

**SESSION II-H [BERGENDOFF, LARSON HALL]
11:45 a.m.-12:45 p.m.**

Lizzy Warkocki, Jenn Darby, Katie Hayes

Project advisors: Lucas Street and Virginia Johnson, Learning Commons; Dr. John Delaney, accounting

Auditing Your Writing: A Collaboration Between Departments

SESSION II-H-1: Bergendoff, Larson Hall [11:45 a.m.-12:15 p.m.]

Who knew accountants and writing tutors could learn from each other? In 2014, the Reading/Writing Center (RWC) was invited to work with accounting classes on professional writing. Building on work by Dr. Laura Greene (English), Dr. John Delaney (accounting) and RWC faculty tutors collaborated to develop a writing program for two classes required for accounting majors: ACCT31: Auditing and ACCT442: Ethics. The writing program currently involves tutors co-leading "Writing for Accountants" in-class workshops, facilitating group conferences on written reports, and critiquing students' drafts of professional emails. This partnership has proved mutually beneficial. Accounting majors reported that, through working with tutors, their writing in other classes and in their professional lives has become more concise and error-free. For example, one student now working at a marketing firm expressed how useful skills learned from the RWC are in writing reports, while another credited this writing instruction with helping him create a winning cover letter for an internship. Some tutors were apprehensive about working with an unfamiliar discipline, but afterward expressed a newfound appreciation for business writing as well as interest in working with other departments. Tutors also faced a learning curve conducting group conferences on co-authored papers, but this atypical dynamic necessitated a "hands-off" approach that ultimately allowed writers to identify and correct their own errors. Ultimately, the accounting/RWC collaboration has benefited--and will continue to benefit--students and tutors alike. This interactive presentation will include discussion of specific editing techniques and a chance for attendees to try "auditing" some written excerpts themselves.

Dr. Jacob Romaniello, Ninna Mendoza, Stefanie Bluemle, Robert Williams

Project advisor: Dr. Jacob Romaniello, Learning Commons

Writing an Award-Winning Research Paper: An Interactive Panel Discussion

SESSION II-H-2: Bergendoff, Larson Hall [12:15-12:45 p.m.]

What does it take to become a published author as a first-year student? How can the skills you learn in your FYI and Honors classes apply to your future years at Augustana and beyond? The annual Tredway Library Prize gives first-year students a chance to showcase the skills they have developed during the FYI and Honors sequences by recognizing an exceptional research paper written by a first-year student. Probe the mind of a Library Prize judge to see what qualities distinguish the winners, and get the inside scoop from two past winners to gain further insight into how you can write the next award-winning research paper. Through an interactive presentation, discover the ins and outs of the research and writing processes by picking apart the past winners' papers, and learn about the greater implications this experience has had for them beyond the prize.

SESSION II-J [BRUNNER THEATRE CENTER, HONKAMP MYHRE BLACK BOX] 11:45 a.m.-12:45 p.m.

Erin Runde

Project advisor: Dr. Catherine Goebel, art history and geography

Preserving Women's History in Rock Island County

SESSION II-J-1: Brunner Theatre Center, Honkamp Myhre Black Box [11:45 a.m.-12:05 p.m.]

A few of the major locations within Rock Island County that provide public history are generally locations where high-/middle-class white males are at the forefront. In my Senior Inquiry, I describe ways to be more inclusive through programming, storytelling and community engagement in the county. Inclusive programming creates a dynamic, authentic and engaging approach to presenting history to the public. Minority voices often are more relatable to audiences and create a story and scale to the environment. I focus on the roles of women in 19th-century households as a foundation. This includes the matriarch, nannies and servants who all coexist within the same space, but usually have very different roles within the home. This is not meant to erase or neglect any history that is usually mentioned on a tour but rather provide deeper context to the day-to-day lives of the people who were essential to having a successful home in that time.

Audrey Johnsen, Riley Kenning, Lauren Clapp, Emma Brutman, Kaylee Stewart, Keila Saucedo, Melissa Conway, Micaela Cushing, Jonathan Meir, Scott Brick, Melina Herman, Thea Gonzales, Mikaylo Kelly, Alexis Downey, Jonathan Quigley, Ian Magnuson

Project advisor: Dr. Jennifer Pople, theatre arts, women's and gender studies

'Stop Kiss': The Trans Experience In Performance

SESSION II-J-2, 3: Brunner Theatre Center, Honkamp Myhre Black Box [12:05-12:45 p.m.]

Diana Son's play "Stop Kiss" is a heart-wrenching narrative of two women who experience a gay bashing in New York City at the turn of the century. But in the 18 years since its publication, things have changed. Director Audrey Johnsen uses "Stop Kiss" to illustrate today's violence facing trans women, currently one of the most vulnerable demographics in America. Through performance of some select scenes and a brief talk-back with the cast and production

team, Johnsen aims to challenge the traditional narrative of trans women in media and bring awareness to trans issues both on campus and in our society as a whole.

SESSION II-L [LIBRARY 2ND (MAIN) FLOOR NORTH] 11:45 a.m.-12:45 p.m.

Emma Albers-Lopez, Monica Gil, Sarah Rebban, Yawei Zhou

Project advisor: Augustana Center for the Study of Judaism and Jewish Culture

Geifman 'Response to the Holocaust' Prize Winners

SESSION II-L: Library 2nd Floor North [11:45 a.m.-12:45 p.m.]

Geifman "Response to the Holocaust" submissions could take the form of an essay, research paper, poem, drama, film, artwork, musical composition or other creative expression. Each year, award winners present their work at Celebration of Learning. This year's winners are: Emma Albers-Lopez—poem: "Nothing"; Monica Gil—musical composition: "Belsen Silence: A Holocaust Remembrance Piece" for clarinet, cello and speaker; Sarah Rebban—essay: "To See in Color"; and Yawei Zhou—photograph: "Endless Grief."

SESSION III 1-2 p.m.

FEATURED FACULTY PRESENTATION [OLIN AUDITORIUM] 1-2 p.m.



Dr. Paul Olsen, English and Africana studies
Racial stereotypes: history and consequences

Several years ago, I asked an Augustana student whom I knew very well to describe his college experience. He was an excellent student, a respected athlete elected captain of the track team, a three-time

All-American and conference champion in track, and he was also a starter on the winning basketball team. He is also African American. His answer: "It was often uncomfortable." This from a student who experienced LOTS of success! My words today are partially motivated by his response. They are also driven by the increased racial unrest that has characterized our country the last few years and by learning and teaching the literature that writers call the "Black Experience in America." First, I would like to take you way back to an earlier time in my own life when I began to find my way on a journey that could be the journey of many of us.

SESSION III-A [HANSON 102] 1-2 p.m.

Dr. Mary Biggin, Valeria Melo, Scott Shaw, Meagan Woodard

Project advisor: Dr. Mary Ellen Biggin, chemistry

The Quest To Covalently Attach Carbohydrates to Gold Surfaces Using Click Chemistry

SESSION III-A-1: Hanson 102 [1-1:20 p.m.]

This work focuses on the covalent attachment of carbohydrates to gold surfaces for biological purposes. Ellipsometry, contact angle measurements and polarization modulation infrared reflection absorption spectroscopy were used to characterize the surfaces before and after modification.

Dr. Jessica Nodulman

Exploring Meditation and Mindfulness Practices

SESSION III-A-2: Hanson 102 [1:20-1:40 p.m.]

In the summer of 2016, with funding from the New Faculty Research Fund and the Faculty Research Fund, I became a certified meditation and mindfulness instructor. I became certified in this area so that I could develop meditation and mindfulness health communication interventions for our community. In this presentation, I will share some simple meditation and mindfulness practices that anyone can use to help improve their own health and wellness.

Dr. Christopher Strunk, Dr. Brian Leech, Irene Mekus

Project advisor: Dr. Chris Strunk, geography

Urban Gardens, Migrant Incorporation, and Civic Agriculture in the West End of Rock Island

SESSION III-A-3: Hanson 102 [1:40-2 p.m.]

Despite people's tendency to see agriculture as a rural activity, urban gardening has been a continuous feature of cities since urbanization began, even as it simultaneously shifts locations and purpose over time. This presentation is based on a paper that is a preliminary exploration of the historical differences and continuities in gardening in the West End of Rock Island, the city's primary site of urban agriculture. At the turn of the 20th century, local philanthropists at a settlement house provided poor immigrant children with 20 x 12 garden plots in the city's West End and downtown. Truck farms, or small-scale commercial gardens with extensive networks connecting local markets, grocery stores and residents, dominated land use in the city's southwest corner until the 1970s. Today, refugees from Asia and sub-Saharan Africa have started gardens in the vacant lots that are a central feature of the neighborhood's landscape. Gardens often have attracted the support of civic actors because of their role in promoting the incorporation of marginalized residents into the city and the nation through food, a cultural practice central to American identity but also perceived to be a relatively non-controversial way of connecting across difference. But while there has been lasting support for urban agriculture, we suggest that gardens also can transform local histories, identities, and physical and cultural landscapes of the region in unexpected ways.

SESSION III-B [HANSON 304] 1-2 p.m.

Kelsey Gorsch

Project advisor: Dr. Heidi Storl, philosophy

Medical Illustration-Cardiothoracic Surgery

SESSION III-B-1: HANSON HALL 304 [1-1:15 p.m.]

In the Division of Cardiothoracic Surgery of the Michael E. DeBakey Department of Surgery at Baylor College of Medicine, the patients are treated for coronary artery disease, heart valve disease, aortic aneurysms and dissections, and other conditions. The focus of my projects was on aortic aneurysms and dissections. An aneurysm is the ballooning of the aorta in a localized spot caused by weakening of the vessel's wall, while dissection is the separation of the aortic wall layers occurring from a tear in the inner layer that allows blood to leak, or dissect, between the wall layers. While interning with Scott Weldon, medical illustrator for Dr. Joseph S. Coselli in the division, I had three projects to introduce me to the role of a medical illustrator. Part of the role of a medical illustrator includes

conducting background research and observing surgeries to create an image that is detailed and anatomically and clinically accurate. The primary goal of my position was to create artwork that can be used for education. The artwork can be used in, but not limited to, informational brochures, textbooks, journals and presentations. My Senior Inquiry project presents a background of the field of medical illustration and the process an illustrator goes through to create artwork for cardiothoracic surgical cases.

Katrina Friedrich, Michelle Fingeret

Project advisor: Dr. Heidi Storl, philosophy

Comparing the Psychosocial Outcomes of Women Who Have and Have Not Yet Completed Breast Reconstruction after 18 Months

SESSION III-B-2: Hanson 304 [1:15-1:30 p.m.]

Breast reconstruction is an important part of the treatment process for women who undergo a mastectomy. The purpose of breast reconstruction is to rebuild a woman's breast mound(s), which can be done by using implants, autologous tissue or a combination of the two. Based on the type and timing of reconstruction, this complex process can take two or more years to complete. During this extensive period of time, women may undergo several procedures and revisions. The first objective of this study was to identify patients who have completed and not yet completed breast reconstruction after an 18-month time period. The second objective was to compare the body image, quality of life and satisfaction outcomes of those who have completed breast reconstruction versus those who have not yet completed breast reconstruction.

Christian Garcia

Project advisor: Dr. Heidi Storl, philosophy

Ronin (Thap11) Is Required for Proper Brain Development

SESSION III-B-3: Hanson 304 [1:30:1:45 p.m.]

One of the main objectives of Dr. Ross Poché's Lab is the study of brain development, specifically involving the transcription factor, Ronin along with its cofactor, Hcf1 and its down-stream target, Mmachc. When Ronin is knocked out, the embryos die before implantation. Surprisingly, however, a cobalamine-deficiency-like patient was recently identified carrying a mutation in Ronin. It is a missense mutation that causes a phenylalanine to turn into a leucine at position 80. This mutation is associated with intrauterine growth retardation, brain defects such as microcephaly, and hydrocephaly, as well as renal and cardiac defects. My goal was to identify differences in brain development of embryos, specifically to identify the difference between ventricles in the brain as well as the cortex. I collected embryos at embryonic day (E)14.5 and processed them for micro CT. Then I constructed a 3D visual of each embryo in which I was able to create a movie and take screenshots of the embryo. I also dissected embryos at age E18.5 and processed them for cryo-sectioning. Once I embedded the embryos, I sectioned them for immunohistochemistry that I stained with DAPI, Phalloidin and Fibrillarlin as biomarkers to identify the structures. I was able to compare the difference between control and mutant embryos, and I determined that the mutant embryos exhibited hydrocephalus. I utilized Surveyor-digestion PCR and gel electrophoresis to genotype the embryos. I also performed a neuronal cultural isolation following a protocol in which I had to dissect the brains out of (E)18.5 embryos and isolate neurons.

Brenna Whisler

Project advisor: Dr. Heidi Storl, philosophy

Public Health, Infectious Disease, and Social Media in a Connected World

SESSION III-B-4: Hanson 304 [1:45-2 p.m.]

Global health has become increasingly important as our world becomes more and more interconnected. Both public and global health were hot-button terms during the Ebola outbreak in West Africa during 2015 and 2016. This summer, I worked with Baylor Global Initiatives to help develop an innovation specifically designed for the Ebola outbreak, the Emergency Smart Pod. The pod is a portable medical facility originally designed to combat the Ebola crisis in West Africa. Sarah Michel and the Baylor Global Initiatives team worked to increase the Emergency Smart Pod's versatility since the Ebola crisis subsided in January of 2016. The Baylor Global Initiatives team ideally wants to commercialize the Pod to generate revenue to invest in designing new innovations. To successfully commercialize the Emergency Smart Pod and other innovations, Baylor Global Initiatives was interested in exploring social media platforms to promote their efforts. I created a communications strategy by researching five of our top academic peers: Yale, Harvard, Duke, Johns Hopkins and Stanford. Then I completed a communications strategy specifically for Baylor Global Initiatives, including: a statement of purpose, current social media trajectory, competitor analysis, organizational and communication objectives, stakeholder identification and a work plan. I was able to provide Baylor Global Initiatives with the information necessary to begin a successful social media and communications platform.

SESSION III-C [HANSON 305] 1-2 p.m.

Lauren Johnson

Project advisor: Dr. Joshua Dyer, engineering physics

DNA Nanotechnology: Propeller Project

SESSION III-C-1: Hanson 305 [1:1-20 p.m.]

The DNA origami method has brought nanometer-precision construction to bioengineering labs, offering myriads of potential applications. This past summer I participated in the University of Illinois' REU program where I utilized DNA self-assembly for the design and development of a DNA propeller. I performed all-atom MD simulations on the solvated DNA nanostructure propeller designed and developed via DNA origami assembly method. I investigated the equilibrium structure, physical variations, and the reaction to external electric field. Analysis of the MD simulations will allow us to determine if the propeller rotates and to ultimately calculate the mechanical efficiency of the nanomachine. Subject to a hydrostatic pressure gradient, the DNA propeller was successfully able to rotate. However, my results indicated the structure and design of the propeller were unstable under the water flux produced for rotation.

Miguel Rodriguez

Project advisor: Dr. Joshua Dyer, engineering physics

Engineering and the Constant Process of Learning

SESSION III-C-2: Hanson 305 [1:20-1:40 p.m.]

I am an engineering physics major. People ask me how I chose to pursue engineering and the sciences, and I tell them it's just been a natural passion of mine. And by natural passion I mean, I played with Legos nonstop when I was younger. I occasionally messed around with wood and screws, and I used duct tape at the same rate avid drivers go through gasoline. I guess I just really liked to create things. And to this day I enjoy making things. But there was a point at

which I wanted to take it a step further and learn how to make things that were intrinsically more complex. And so it seemed natural that I pursue engineering.

Nicholas Misner

Project advisor: Dr. William Peterson, physics

TeraHertz: Interpreting and Modelling Radioastronomic Data of the Algol-AB Binary

SESSION III-C-3: Hanson 305 [1:40-2 p.m.]

When many people think of astronomy, they may limit their observations to purely optical light—only a fraction of the electromagnetic spectrum! In my presentation, I explain where the data I examined came from, the processing of the data and the underlying concepts that connect these observations to modeling the magnetosphere of the close-binary of the Algol star system.

SESSION III-D [OLIN 305] 1-2 p.m.

Ali Rabeih, Dr. Andrew Sward, Dr. Forrest Stonedahl

Project advisor: Dr. Andrew Sward, applied mathematics

Predator-Prey Radiodrome Model

SESSION III-D-1: Olin 305 [1-1:30 p.m.]

This presentation is a summary of my research with Dr. Andrew Sward that involves numerical analysis and algorithms to model a real-life situation. The project that I will present is a study of a radiodrome model following a target moving under a constant acceleration by a predator going at a constant speed and always heading directly at the prey. The aim of my project is to numerically find a relationship between the critical predator's speed, target's acceleration and their initial separation distance in case of a successful catch using Java.

Allan Daly

Project advisor: Dr. Jon Clauss, mathematics

The Peaks of Topology

SESSION III-D-2: Olin 305 [1:30-2 p.m.]

The session will be a journey into the mountain range of topology; covering the material learned in Allan Daly's Senior Inquiry during the past two terms. The session will cover what is topology, where did the field come from, and what is a topological subspace. From there, the session will go over open and closed sets, and the part they play with topological subspaces on the real line. Once an open set has been defined, we will move on to epsilon balls in any real space, and what a basis in topology is. The session will end with a peak experience of the Senior Inquiry, applications of topology in the real world and questions from the audience. No mathematical knowledge of topology is needed.

SESSION III-E [OLD MAIN 132] 1-2 p.m.

Steven Mondloch

Project advisor: Dr. Mischa Hooker, Classics

The Death of Priam and Subversion in Book II of Vergil's 'Aeneid'

SESSION III-E-1: Old Main 132 [1-1:15 p.m.]

Priam's murder at the hands of Neoptolemus, as seen and retold by Aeneas during the legendary Fall of Troy in Book II of the "Aeneid," is as gory as it is glorious. Allusions to the rich tradition of Greco-Roman literature as well as to events during Vergil's own time combine to show the potentially subversive motivations behind Vergil's poem.

Nathan Payne**Project advisor:** Dr. Mischa Hooker, Classics***The Classical Roots of the Jacobean Memento Mori Theme*****SESSION III-E-2:** Old Main 132 [1:15-1:30 p.m.]

During the early 17th century, after the death of Queen Elizabeth and the accession of King James, England went through an obsession with death. The literature of this period is filled with reminders of the fact of human mortality, and is thus closely associated with the memento mori trope. My Senior Inquiry investigates the extent to which this trope had roots in the classical world, and to what extent it is a medieval or early modern concept. This project pays special attention to the work of the lyric poet Horace and the Stoic philosopher Seneca.

Dr. Mischa Hooker, Henry Roderick, Blake Erquiaga**Project advisor:** Dr. Mischa Hooker, Classics***Video Game Development in an Academic Context*****SESSION III-E-3:** Old Main 132 [1:30-2 p.m.]

This presentation will describe and demonstrate ongoing efforts to bring together skills and interests from different disciplines to foster and use video game development in an academic environment, with three parts: (1) digital game projects to facilitate Latin language learning (Mischa Hooker); (2) graphic design used for asset creation in the development of this project (Henry Roderick); (3) experiences and in-progress projects of the new student group focused on video game development (Blake Erquiaga).

SESSION III-G [EVALD 17 & 18] 1-2 p.m.**Ian Magnuson****Project advisors:** Dr. Adam Kaul and Dr. Carrie Hough, anthropology; Dr. Jason Mahn, religion***Jesus Leans Left: A Christian Intentional Community's Path to Revolution*****SESSION III-G-1:** Evald 17-18 [1-1:15 p.m.]

This presentation is based on a paper that investigates the historical relationship between anarchy and Christianity through the ethnographic study of the members of a small Christo-anarchist intentional community in Minneapolis, Minn., called the Mennonite Worker. This community finds itself in a country widely controlled by a misinterpretation of the Gospels that propagate empiric rhetoric and dominance over its people. In contrast of this Church-Empire union, I propose that anarchism offers Christians a more radical way of viewing power structures and challenges them to live to address issues of dominance in the United States. Through descriptions of a ritual concerning death and transition as well as interviews conducted with community members, I focus on a community attempting to reform its identity while simultaneously navigating what it means to be a queer Christian.

Brianna Meyer**Project advisors:** Dr. Adam Kaul and Dr. Carrie Hough, anthropology***Riding in Circles: Horse(w)manship in the American Saddlebred Community*****SESSION III-G-2:** Evald 17-18 [1:15-1:30 p.m.]

Not many people know about the very small, yet very dynamic sect of intense sport culture of the American Saddlebred show horse. Even those who do could always learn more since, like any subculture, it constantly evolves and changes through time. This presentation is based on a paper that outlines the historical changes since the

advent of Saddlebred showing with a focus on female involvement and feminist revolution. Gender has been an important but relatively unseen factor within the community itself—female participants today do not know the history of female involvement. But based on an emergence of women professionals and amateurs in the past 50 years, gender obviously has power in the training and showing aspects of the Saddlebred community. Until now, no one has taken the time to analyze the history or the current changes being made involving men and women equestrians. Stories, quotes and memories from trainers, exhibitors and archives alike were gathered and analyzed over a period of nine months. Viewing this data from a historical and feminist lens, the paper analyzes how being an equestrienne has changed over time, and how those who grew up in the horse industry completely changed the way the community worked. In doing so, they have helped pave the way for female equestrians two and three generations after.

Lauren Clapp, Janelle Norden**Project advisor:** Keri Bass, CORE community service coordinator***Does College Student Food Insecurity Really Exist? 'Lettuce' Talk About It*****SESSION III-G-3:** Evald 17-18 [1:30:1:45 p.m.]

Think of the stereotypical college student diet. Do Ramen Noodles and Easy Mac immediately come to mind? Whether you thought of that or not, this session is still for you. In this presentation, members of the Augustana Campus Kitchens Leadership Team will discuss what food insecurity actually is, and then we will explore what it looks like to students in our country, in the Quad Cities and at Augustana. This session will educate faculty and staff in understanding how to handle issues of food insecurity and enable them to be resources for our students. It also aims to educate Augie students on the food insecurity problem surrounding them and ultimately, to start a dialogue to #starvethestigma about food insecurity.

Raven Hoffman, Savi Jayawardana, Tharakie Pahathkumbura, Cindy Morales, Ian Magnuson**Project advisors:** Dr. Jason Mahn and Dr. Dan Morris, religion***The Micah Experience 2017*****SESSION III-G-4:** Evald 17-18 [1:45-2 p.m.]

The residents of Micah House will provide a unique insight to what it means to live in an intentional community while balancing the social and academic demands of being a senior at Augustana College.

SESSION III-J [BRUNNER THEATRE CENTER, HONKAMP MYHRE BLACK BOX] 1-2 p.m.**Paul Lewellan, Brett Benning, Jordan Brown, Mariah Coachman, Cassidy Fauser, Nora Graehling, Ryan Kilroy, Jenna Lawrence, Brandy Mathews, Silas Metternick-Jones, Kaitlin O'Brien, Selena Romano, Maggie Sampson, Elizabeth Warkocki, Margaret Williams****Project advisor:** Dr. Paul Lewellan, communication studies***Performance Studies: Women's Stories*****SESSION III-J:** Brunner Theatre Center, Honkamp Myhre Black Box [1-2 p.m.]

Historically, women have been silenced by male-dominated systems and institutions. Even today, women are underrepresented in legislative bodies, boardrooms, courts and other positions of power. The stories of strong women have smaller audiences than the stories of girlfriends, sex objects and entertainers. Women's issues are co-opted by men. Women's sports triumphs may go

unrecognized compared to World Series, World Cup and Super Bowl stories. This performance seeks to give voice to women and to invite the audience members to participate in positive dialogue. The primary texts for interpretation will be memoirs, blogs, scholarly texts, interviews and news reports. The three groups presenting will use found text to create a unique and unified performance dealing with the issues of female identity, sexualized media and women in sports.

SESSION III-K [BRUNNER THEATRE CENTER, WILSON CENTER] 1-2 p.m.

Hena Thakkar

Project advisor: Dr. Charles Rice-Davis, French

Enlightenment Values in a Post-Truth World

SESSION III-K-1: Brunner Theatre Center, Wilson Center [1-1:20 p.m.]

For all the gains that digital technology provides, there have also been some grave losses. Technology has affected adversely our attention span, our ability to judge the vast amounts of information that is disseminated, and perhaps, if not engendered, then encouraged the sort of partisanship that feeds on confirmation bias. This is particularly relevant and consequential in the era of fake news and alternative facts that have created a breeding ground for right-wing populism and that have endangered the Enlightenment ideal of an independent, free-thinking, informed citizen. We will present and examine key parts of the work of the philosopher Bernard Stiegler, who considers technology as remedy and poison, and Kant's "What is Enlightenment?"

Layne Porembski

Project advisor: Dr. Taddy Kalas, French

'Qui suis-je?' Identity in Jean Racine's Tragedies

SESSION III-K-2: Brunner Theatre Center, Wilson Center [1:20-1:40 p.m.]

A 17th-century French dramatist, Jean Racine presented characters and plots that were complex and often led to unfortunate conclusions. The research presented here focuses on the identities of the characters from Racine's nine tragedies and how the characters often met identity crises that tied closely with the tragic ends of the plays. Starting from the earliest tragedy "La Thébaine" and ending with the last "Athalie," we see different identities, from fixed and monstrous to elusive and devoted and more. From our observations and our research from academics such as Sigmund Freud, we see the complexity that Racine instilled in his characters, as well as the effect upon his tragedies.

Michael Partyka

Project advisor: Dr. Taddy Kalas, French

Exploring the Role of the Divine in the Theatre of Jean Racine

SESSION III-K-3: Brunner Theatre Center, Wilson Center [1:40-2 p.m.]

This is an investigation as to what extent the divine (whether that be the Greek gods or the God of Abraham) plays a role in the works of the 17th-century playwright Jean Racine.

SESSION III-M [OUTDOOR SITES; RAIN SITES: LIBRARY 2ND (MAIN) FLOOR AND GÄVLE ROOM, THE GERBER CENTER, 1-2 p.m.]

Rebecca Wee, Emilie Antolik, Jason Carey, Jessica Estes, Alyssa Froehling, Andrea Grubaugh, Elena Leith, Emma Smith, Emma Stough, Nathan Wendt

Project advisors: Rebecca Wee and Dr. Kelly Daniels, creative writing

Distorted Lullaby: Creative Writing Senior Reading 2017

SESSION III-M-1, 2, 3, 4: Gazebo (Rain site: Library, 2nd (Main) Floor) [1-2 p.m.]

Augustana College's creative writing students present a group reading of poetry, fiction and creative nonfiction from their final Senior Inquiry manuscripts/projects. Each will read for approximately five minutes and, if they wish, briefly introduce their project and genre.

Dr. Robert Elfline

Terry Riley's 'In C'

SESSION III-M-1, 2, 3, 4: Quad (Rain site: Gävle Room, The Gerber Center) [1-2 p.m.]

Terry Riley's "In C" is widely regarded as the first musical composition to incorporate stylistic elements that later would be described as "minimalism." Augustana students enrolled in MUSC 213 perform the piece each year in class as part of a detailed investigation of the music of the 20th and 21st centuries. This year, we will be presenting the work in public performance involving the current MUSC 213 students as well as other music students and faculty members.

SESSION IV 2:15-3:15 p.m.

FEATURED STUDENT/FACULTY COLLABORATION PRESENTATION [BRUNNER THEATRE CENTER, HONKAMP MYHRE BLACK BOX] 2:15-3:15 p.m.



Dr. Pat Shea, Shannon Smith, Haylee Walker, Devyn Absher, Madison Stoneman

Project advisor: Dr. Pat Shea, communication studies

Reflective Practitioner Senior Inquiry

Using two frames—Augustana Student Learning Outcomes (2013) and the seminal work of Donald A. Schon, *The Reflective Practitioner* (1983)—RPSI (Reflective

Practitioner Senior Inquiry) students explored, reflected, connected and responded to the multi-dimensional learning experiences of Augustana College. This capstone project provided students the opportunity and tools to demonstrate their personal and professional abilities and talents that empower them to respond in service and leadership to the complexities of a diverse and ever-changing world. RPSI integrated the two established approaches of Senior Inquiry projects and offered students an opportunity to creatively express the goal of Senior Inquiry—to integrate the many different courses into a capstone project. It provided a way for them to demonstrate to graduate schools and employers the range of their knowledge and abilities. Through yearlong conversation, reflection, creative

expression, writing, reading and commitment to the RPSI process, students generated a personal and professional product that expresses who they are and what they can do to effectively respond to the challenges and opportunities of an ever-changing diverse world.



Shannon Smith

Self: Exploring Academic Works Through a Gallup Strengths Assessment Lens

My Senior Inquiry project is an analysis of my Gallup Strengths Assessment, how my strengths manifested throughout my collegiate career and how they will benefit me post-graduation. With this, I will use a social science theory to better explain

these strengths and will use a combination of an oral and visual presentation.



Haylee Walker

Travel Responsibly: Analyzing and Applying the Behaviors and Choices of Travelers and Their Effects

I will be presenting my Senior Inquiry research on the topic of “responsible tourism” and providing a small tool for travelers in response to this worldwide issue. My goals are to create awareness and inspire/motivate

listeners (or readers) to participate in “responsible tourism,” pass on this information, create discussions on what they have learned, and continue their own research on this topic. I will be analyzing the intertwined behaviors and choices made by tourists in relation to hosts and brokers, and in turn, showing the positive and negative effects this has on several fronts.

Devyn Absher

Communication Studies Reflective Practitioner Senior Inquiry Project

My Senior Inquiry project is focusing on how communication theories and humans are so unique and different, and yet work together to flow in and out of situations to help us do something very important: express ourselves. My goal for my Senior Inquiry was not only to reflect on my academic experiences from these past four years at Augustana, but also to take that knowledge and apply it in a way that would create a visual artistic representation. My 5 x 7-foot canvas shows how I comprehend communication theories through texture.



Madison Stoneman

Reflective Practitioner Senior Inquiry: How Fashion Communicates

I have been working on a capstone project through the year. The final goal of this project is to display the choices people make to portray themselves, particularly through fashion. The main theme of my project is how fashion communicates, which is

grounded in the theory of strategic communication. How I got here: I started fall term working on consistency. For 30 days I had my picture taken each day at the same exact time. At the time, I saw this project heading toward the ideas of image and social media. I wanted to expose how many times people took the same picture just to post it. In my case, I was given only one photo and however it turned out was the way I was going to display it in my gallery. Later on in the year, I thought more about fashion, something I am truly inspired by. I began to dissect my photos, and I realized the beauty of them is the way my clothes were able to make a variety of expression. In the second half of the project, I decided that I wanted

to display someone else. Since I had focused on consistency before, I decided to work in an unsystematic way during the second part of the capstone. I followed my subject, Kathleen, for 30 days taking photos of her whenever I saw her that day. I wanted to showcase that clothing is not only a form of covering up one’s body but also extremely strategic. Our clothing at that time represents one part of ourselves that makes up our identity. In my display, I am not only a student, but I am a friend, daughter, sorority sister, mentor, workout partner, artist, etc. Why strategic communications? Strategic communication ties in perfectly with my project because “it focuses on how the organization itself presents and promotes itself through the intentional activities its leaders, employees and communication practitioners.” Though I am claiming that the way one dresses is in fact strategic and not random, I do not disregard the “unintended consequences of communications (that) can adversely impact the ability of an organization to achieve its strategic goals.”

SESSION IV-A [HANSON 102] 2:15-3:15 P.M.

Vanessa Lopez, Alina Zabolotico

Project advisor: Stephanie Fuhr, biology and pre-medicine

S.T.A.Y. C.A.L.M.—Promoting Awareness, Prevention and Access to AEDs

SESSION IV-A-1: Hanson 102 [2:15-2:35 p.m.]

Today, 450,000 people die per year due to sudden cardiac death (SCD). It happens within seconds, leaving an everlasting effect on the victim, family and the victim’s health if they survive. Because of this effect, we focused our research on the number one first-response factor in the population that would enable the ability of civilians to take action in cases of SCD, which is through automated external defibrillators (AEDs). In our study, we first found current research conducted on the education of AEDs as well as the AEDs’ ability to decrease mortality rate if civilians knew how to use them. We then went out to the Elgin community—the number one community with Hispanic women in Illinois, which is the primary group with the most SCD incidences. We ask residents and the police a set of questions regarding access to AEDs and the use of AEDs. After analysis of the results, we created and implemented a protocol called S.T.A.Y. C.A.L.M. This acronymic protocol is the beginning step for our goal of raising awareness and education of access to AEDs through civilian action and technologically based matters. A description of our linked project called VirtualLynk will be described with an example of one of our first patients. To impact the communities and ethnicities with the highest number of SCD deaths—Hispanics and African Americans—a branch of VirtualLynk was specifically created and initiated. Communities of different ethnicities may have a health risk of which they are not aware. Thus, through S.T.A.Y. C.A.L.M. and the VirtualLynk Hispanic Outreach Initiative, we plan to increase awareness and community action, transcend healthcare and direct telemedicine not only to communities in the United States, but also to Ecuador.

Charlie Bentley, Jamie Fee, Mackenzie Ryan, Francesca Scribano, Dr. Kimberly Murphy

Project advisor: Dr. Kimberly Murphy, biology

Contributing to Studies on the Evolution of Myxococcus xanthus in the Laboratory

SESSION IV-A-2: Hanson 102 [2:35-2:55 p.m.]

Myxococcus xanthus (*M. xanthus*) is a Gram-negative bacterium typically found in soil that is known for its complex social behaviors. *M. xanthus* wild type DK1622 laboratory strain originated in the laboratory of Dale Kaiser at Stanford University and has been distributed to laboratories worldwide. DK1622 "sublines" were collected from nine research laboratories by Roy Welch at Syracuse University, and the genome of each was sequenced. These DK1622 "sublines" have evolved since their physical separation. We obtained two of the DK1622 "sublines" and are currently disrupting the same subset of genes in both. Therefore, we are creating several new mutant strains. Each mutant strain will be assayed for motility and fruiting body development to determine if the phenotypes are different when the same gene is disrupted in different wild type DK1622 "sublines." Our results combined with others are helping the *M. xanthus* scientific community better understand the evolution of *M. xanthus* in the laboratory.

SESSION IV-B [HANSON 304] 2:15-3:15 p.m.

Christopher Saladin

Project advisors: Dr. Emil Kramer, Classics; Dr. Christopher Whitt, political science

Revolution in the Divided City: The Plebeian Social Movement, Secessions, and Anti-Government in the Roman Republic During the 5th Century Struggle of the Orders

SESSION IV-B-1: Hanson 304 [2:15-2:35 p.m.]

This paper examines the formation of the plebeian movement and government in the Roman Republic during the 5th Century BCE of the Struggle of the Orders. The Struggle of the Orders was the political conflict between the plebeian and patrician classes of Rome that lasted from 5th-3rd Centuries BCE of the Republic. Most of this period is shrouded in legend, but later Roman historians provide evidence that suggests a major social and political revolution occurred during the early years of this struggle. Using kernels of evidence from later narrative histories, namely that of the 1st Century BCE historian Livy, I construct a new narrative of the early struggle that reveals a city crippled by divisive revolution. I begin by examining the catalysts of this social revolution, then focus in on the First Secession of 494 BCE and the establishment of the plebeian movement and formation of its anti-government. Next I move to the impact the plebeian movement and the radical oligarchy of the Decemvirate that followed. Lastly, I examine the Second Secession of 449 BCE and incorporation of the plebeian institutions into the Roman government through the Valerio-Horatian Laws and the Twelve Tables. I particularly focus on the development of the plebeian order, the scale and nature of this revolution, and the role the city of Rome's geography played. I ultimately argue that the secessions were full scale political revolutions carried out by less advantaged Romans that totally redefined the government of the Roman Republic for centuries.

Irene Mekus

Project advisor: Dr. Chris Strunk, geography

Greek Identity Past and Present in the Quad Cities

SESSION IV-B-2: Hanson 304 [2:35-2:55 p.m.]

Many Greeks came to the United States and the Quad Cities in the early 1900s where there was opportunity for work and upward mobility. In 1912, East Moline was the largest colony of Greek immigrants in the area. While the immigration history of Swedes, Germans, Belgians and Mexicans in the Quad Cities is well recorded, Greek immigration is not written about to the same extent. Understanding challenges faced by Greek migrants in the Quad Cities and how these influenced Greek identity and "sense of place" over time and through multiple generations give meaningful insight into the challenges they overcame and the lives they lived. This project investigates identity formation, belonging and sense of place of first-, second- and third-generation Greeks in the Quad Cities through archival research and interviews to reveal a comprehensive look into the Greek history and heritage of the Quad Cities.

Abigail Thomson

Project advisors: Dr. Forrest Stonedahl, mathematics and computer science; Dr. Ian Harrington, psychology and neuroscience

Investigating Trust and Trust Recovery in Human-Robot Interactions

SESSION IV-B-3: Hanson 304 [2:55-3:15 p.m.]

As artificial intelligence and robotics continue to advance and be used in increasingly different functions and situations, it is important to look at how these new technologies will be used. An important factor in how a new resource will be used is how much it is trusted. This experiment was conducted to examine people's trust in a robotic assistant when completing a task, how mistakes affect this trust, and if the levels of trust exhibited with a robot assistant were significantly different than if the assistant were human. The task was to watch a computer simulation of the three-cup monte or shell game where the assistant would give advice and the participant could choose to follow, ignore or go against the advice. The hypothesis was that participants would have higher levels of trust in the robotic assistant than the human, but that mistakes would have a larger impact on trust levels. The study found that while there was not a significant difference between the overall levels of trust between the robotic assistant and the human one, mistakes did have a significantly larger impact on the short-term trust levels for the robotic assistant versus the human.

SESSION IV-E [OLD MAIN 132] 2:15-3:15 p.m.

Daniel Fieseler

Project advisors: Dr. Jason Mahn and Dr. Daniel Morris, religion

Faith Formation and Development: A Qualitative Study of Young Adults

SESSION IV-E-1: Old Main 132 [2:15-2:35 p.m.]

This presentation is about an article that discusses faith development and faith formation of young adults through a qualitative study. For the study, 10 high school-aged students were interviewed about how they came into their Christian faith and how they have developed their faith since. The purpose of the study is to gain insight into the spiritual lives of young adults in greater depth than the insights one gains from a quantitative study. In regards to faith development, this study is used to find which ways the subjects progress their faith and the people who are influential in their faith development. The specific ways in which young adults develop their faith is also discussed in this article. Themes of faith development and faith formation occur and are discussed in greater detail with

quotes from the interviews. The results are compared to those of the National Study of Youth and Religion. This article is not used for major conclusions but to gain greater insight into the lives of young adults and their faith.

Atticus Garrison

Project advisors: Dr. Brian Leech, history; Dr. Daniel Morris, religion

Retroactive Definitions: The Problem with the Traditional Marriage Argument

SESSION IV-E-2: Old Main 132 [2:35-2:55 p.m.]

Words often change meaning over time. For example, until the 1960s, the word “gay” meant “light-hearted and carefree” or “brightly coloured; showy.”¹ But after the 1960s, the definition of “gay” drastically changed, to mean a “homosexual.”² “When you’re with the Flintstones, Have a yabba dabba-do time A dabba-do time, We’ll have a gay old time!”³ This means that when we look at the theme song for the classic cartoon “The Flintstones,” we should not apply our definition of what “gay” means to how it is used in the theme song. Definitions of marriage work much in the same way as any other definition. The definition is reliant on the repeated use of an act or word. Looking over the course of American history, marriage has been in a constant state of change. Marriage was used by immigrant women in Jamestown as a way to gain wealth and social standing. In the 1800s, personal agency entered the practice of marriage, and women and men viewed love as the driving force. During the American Civil War, the ties between extensive courtship practices and the involvement of the betrothed’s families in the marriage was lessened. There were many who tried to claim that these changes were tearing down the institution of marriage. We now live in a climate that seems to speak with similar rhetoric. Proponents for traditional marriage believe that same-sex marriage goes against something that is fundamental for the practice of proper marriage. Looking at the history of marriage in America, it is hard to conclude that this is widely accepted throughout American history. Marriage holds many economic and societal roles that are not often talked about by proponents of traditional marriage. Marriage has always been defined retroactively by people who are attempting to address changes in how marriage is practiced, and the modern argument about traditional marriage is a part of this continued trend. Marriage is defined by how people practice it, not by some arbitrary definition. ¹ “Gay—Definition of Gay in English | Oxford Dictionaries.” Oxford Dictionaries | English. Accessed January 24, 2017. <https://en.oxforddictionaries.com/definition/gay>. ² Ibid. ³ The Flintstones. Animation, Comedy, Family, 1960.

SESSION IV-G [EVALD 17 & 18, 2:15-3:15 p.m.]

Lizandra Gomez-Ramirez

Project advisors: Dr. Mariano Magalhães, political science; Dr. Adam Kaul, anthropology

Building a House: Remittances, Migration, and Transnational Families in a Rancho in Mexico

SESSION IV-G-1: EVALD 17-18 [2:15-2:35 p.m.]

This presentation is based on my Senior Inquiry paper that presents findings from interviews conducted in a Rancho (small, rural village of 150 people) in the municipality of Acámbaro, Guanajuato, Mexico, during June 2016. The participants interviewed range from current/past migrants, family members of migrants, and local government officials. Guanajuato is a traditional migrant-sending state, which is important because recent studies show that Mexican migration to the United States has been declining and, in turn, that remittances to Mexico are declining. There were many people in this Rancho

who had a migrated or had a family member who migrated to the United States for economic reasons. My paper focuses on how migration has affected this Rancho through the lenses of migration, remittances and transnational families. These findings also will provide an insight into Mexicans’ attitudes towards migration as an economic strategy to preserve the livelihood of the family and the current role of remittances in this village. This research is important to understanding whether remittances have led to sustainable development, whether Mexican migration to the United States will continue as an economic strategy, and how it has created a transnational community in this small village in Mexico.

Grace Carlson

Project advisors: Dr. Paul Croll, sociology; Dr. Mariano Magalhães, political science

Where Do Women Stand?: Attitudes Towards Female Political Participation in India and the U.S.

SESSION IV-G-2: Evald 17-18 [2:35-2:55 p.m.]

This project aimed to study attitudes towards gender inequalities in politics, both in the United States and India. With original survey research and World Values Survey data, American and Indian attitudes toward women in politics were analyzed and compared. Ultimately, the project found that respondents in both countries still hold distinctly unequal views on women in the political sphere.

Trevor Rogers

Project advisor: Dr. Mariano Magalhães, political science

The Road to Hell Is Paved with Bad Public Pensions: An Analysis of Illinois’ Public Pension System

SESSION IV-G-3: Evald 17-18 [2:55-3:15 p.m.]

This project seeks to deeply analyze the public pension system of the State of Illinois and to explain how its mismanagement has created an economic mess for Illinois.

SESSION IV-K [BRUNNER THEATRE CENTER, WILSON CENTER] 2:15-3:15 p.m.

Hena Thakkar

Project advisor: Dr. Taddy Kalas, French

Passion, Heroism, and Duty in the Plays of Jean Racine

SESSION IV-K-1: Brunner Theatre Center, Wilson Center [2:15-2:35 p.m.]

To understand the theater of Jean Racine more clearly, it is helpful to compare him with his contemporary and rival, Pierre Corneille. What unites them is tragedy and the demands of classicism. However, what does each author find tragic? We will examine three concepts in particular: the passions, the dilemma and heroism. It is our contention that heroism has been diminished in the works of Jean Racine.

Jaime Schultz

Project advisor: Dr. Taddy Kalas, French

The Double Féminin in the Plays of Jean Racine

SESSION IV-K-2: Brunner Theatre Center, Wilson Center [2:35-2:55 p.m.]

This work takes on a feminist approach and studies extensively the *oeuvre* of Racine.

Elizabeth Warkocki

Project advisor: Dr. Taddy Kalas, French

French Senior Inquiry

SESSION IV-K-3: Brunner Theatre Center, Wilson Center
[2:55-3:15 p.m.]

My Senior Inquiry focuses on an analysis of 17th-century French theater, specifically, the tragedies of Jean Racine. I analyzed the role of the stranger in his 11 tragedies and the role of Orientalism, a concept coined by theorist Edward Said. In every play where a stranger is present, which is true for all but two, the stranger character serves to reinforce the power of the dominant culture. In other words, the stranger serves as the other that embodies the negative side of the cultural binary. This character allows those of the dominant culture to gain a favorable position in comparison.

SESSION V 7-8:30 p.m.

SESSION V-J [BRUNNER THEATRE CENTER, HONKAMP MYHRE BLACK BOX] 7-8:30 p.m.

Keila Saucedo

Project advisor: Dr. Jane Simonsen; history, women's and gender studies

"Only I"

SESSION V-J-1, 2, 3, 4: Brunner Theatre Center, Honkamp Myhre Black Box [7-8:30 p.m.]

"Only I" is a compilation of vignettes that I have been writing, editing and toying with since I began my academic career here at Augustana. My conjugated oppressions and experiences as a woman of color in the United States largely inspire the content. The production is meant to emphasize the healing and inspiring aspects of creating art among community members. "Only I" is a project about the experience. The work of the show though is not the performance, but the way that we hold our sacred rehearsal space. In attempts to decolonize both the process and the show, we will be working under an ensemble style; wherein no one position is held higher than another. Using theory pulled from Renato Rosaldo's "Culture and Truth" as well as care-focused feminism, "Only I" attempts to push the boundaries of what it means to participate in art. This inquiry will be put on a stage unabashedly. Not to shame, blame or hurt anyone but because it is a truth, a story that needs to be told.

SPECIAL PROJECTS

TUESDAY, MAY 2

Dr. Forrest Stonedahl, computer science

Augustana Invitational Robotics Challenge 2017

Hanson 102 [7-8:30 p.m., May 2]

The 2nd Annual Augustana Invitational Robotics Challenge will involve student teams (possibly from other schools in the region, as well as Augustana) bringing forth the robots that they have designed, built and programmed to compete against one another. This year's challenge task involves quickly knocking as many ping pong balls out of a walled arena as possible.

WEDNESDAY, MAY 3

Dr. Shara Stough, Dr. Rupa Gordon, Dr. Scott Gehler, Dr. Ian Harrington, Michael Clapp, Cora Habeger, Kristina Humphreys, Kia Lechleitner, Katelyn Lorenz, Lisa Nguyen, Phoebe Strell, Margaret Utgaard

Project advisor: Dr. Ian Harrington, neuroscience

NeurdFest: Engaging Elementary and College Students in Brain Awareness

[NOT OPEN TO THE PUBLIC]

Augustana College's annual brain awareness outreach event, NeurdFest, is in its third year. Since 2015 we have brought second-grade students from Longfellow Elementary to campus to learn about the brain. Beginning last year, the Longfellow teachers have been preparing their students for the event by reading the book, "Your Fantastic Elastic Brain: Stretch It, Shape It," written by JoAnn Deak and illustrated by Sarah Ackerley. Then, when they visit with us on the morning of Celebration of Learning, the elementary students learn about the general functions of the brain, how the brain deals with sensory information, how brain cells transmit signals, how the brains of different animals compare and, perhaps of greatest practical significance, why it is important to practice brain safety, all through a series of interactive exhibits. As facilitators of these same exhibits, our students learn how to engage others with the academic discipline in which many of them have chosen to major. We expect this annual outreach program continue for many years to come as it has proven valuable for all of its participants.

Natalie Trujillo

Project advisor: Dr. Jessica Nodulman, communication studies

Project SAVE

The Gerber Center, 4th Floor Hallway [10 a.m.-3 p.m.]

Project SAVE (Sexual Assault Violence Education and Empowerment) is a group making a difference by improving the way our campus views sexual assault and sexual health through education and awareness. Learn more about the group and the many upcoming events and campaigns we are planning. This is also a chance to get involved, as we are looking to expand the group for next year.

Sustained Dialogue Moderators and Steering Committee members

Project advisors: Dean Evelyn Campbell, Student Affairs; Provost Pareena Lawrence, Academic Affairs

Cookie Conversations

Outdoor locations: (1) by clock outside Hanson, (2) Unity Pole outside Old Main, (3) near steps to The Gerber Center. [Rain sites: Hanson lobby; Old Main, 1st floor lobby; outside the Oasis Room, The Gerber Center] [10:30 a.m.-3:15 p.m.]

Join us for light refreshments throughout the day as we discuss identity and how it relates to the Augustana community! Stop and chat for about five minutes, then help yourself to cookies or water and be on your way.

FACULTY ACHIEVEMENTS

CALENDAR YEAR 2016 (updated 4/24/17)

Compiled and formatted by Ann K. Miller, Thomas Tredway Library

Bluemle, Stefanie and Samantha Crisp. "A Little More Conversation, A Little More Impact: A Case for Collaboration in Special Collections and Information Literacy Instruction." Presented at the International Federation of Library Associations and Institutions' Information Literacy Section Satellite Preconference, Chicago, IL, Aug. 2016.

Bracke, Deb, Katherine Aquadro, Courtney English and Kyle Villarreal. "The Expanded Core Curriculum: What we Learned at the Florida School for the Deaf and Blind." *Council for Exceptional (Division of Visual Impairment) Journal*. Spring, 2016: 77-84. Print.

Burnham, Jennifer, Emmanuel Gabet and Taylor Perron. "Critiques of the Seismic Hypothesis and the Vegetation Stabilization Hypothesis for the formation of Mima mounds in the western U.S." *Geomorphology*. 15 Sep. 2016: 40-42. Print.

Calder, Lendol and Tracy Steffes. "Measuring College Learning in History." *Improving Quality in American Higher Education: Learning Outcomes and Assessments for the 21st Century*. Ed. Richard Arum, Ed. Josipa Rokstra, Ed. Amanda Cook. Jossey-Bass, 2016: 37-86. Print.

Calder, Lendol. "The Role of the Scholarship of Teaching and Learning in Current Discussions of Tuning and Learning Outcomes." Presented at the American Historical Association 2016 Annual Meeting, Atlanta, GA, 7-10 Jan. 2016.

Calder, Lendol. "The US History Subject Test: One Hundred Years and Counting." Presented to the College Board History Advisory Committee, New York, NY, 19 Feb. 2016.

Calder, Lendol. "Keynote Talk on the History of Consumer Credit." Presented at the Mercatus Center's Consumer Credit Symposium: A Century of Experience with the Uniform Small Loan Law, Mississippi State University, Starkville, MS, 9 Dec. 2016.

Calder, Lendol. "Measuring College Learning." Presented at the 2016 SoTL Commons Conference, Coastal Georgia Center, Savannah, GA, 30 Mar.-1 Apr. 2016.

Carter, Angie L., Claudia M. Prado-Meza, and Jessica Soulis. "Learning to Transgress: Creating Transformative Spaces In and Beyond the Classroom." *Learning, Food, and Sustainability: Sites for Resistance and Change*. Ed. Jennifer Sumner. New York: Palgrave MacMillan, 2016. 221-237. Print.

Carter, Angie L. "Placeholders and Changemakers: Women Farmland Owners Navigating Gendered Expectations." *Rural Sociology*. doi: 10.1111/ruso.12131, 25 Sept. 2016.

Carter, Angie L. "1000s of Acres: Adding Conservation Partners." Presented at the Iowa Water Conference, Ames, IA, 23 Mar. 2016.

Carter, Angie L. "Watershed Stories: Grassroots Efforts Reframing Water Pollution Polarization." Presented at the Rural Sociological Society Conference, Toronto, Canada, Aug. 2016.

Carter, Angie L. "No Bakken Here! Reframing NIMBY to Legacy and Justice." Presented at the International Rural Sociological association's World Congress of Rural Sociology, Toronto, Canada, Aug. 2016.

Carter, Angie L. "A Feminist's Guide to Fighting Pipelines." Presented at the Iowa City Book Festival, Iowa City, IA, 8 Oct. 2016.

Corts, Dan and Yaschur, Carolyn. "Good crop, bad crop: Composition and visual attention in photojournalism." Presented at the Association for Education in Journalism and Mass Communication, Visual Communication Division, Minneapolis, MN, August 2016.

Crisp, Samantha. "If They Liked It You Should Have Put a Number on It: Assessing Archival Instruction and Student Engagement in Special Collections." Poster presented at the Midwest Archives Conference Annual Meeting, Milwaukee, WI, 27-30 Apr. 2016. **Winner of the Best New Professional Poster Award**

Crisp, Samantha. "Assessing Archives: Case Studies in Using Data as an Advocacy Tool." Presented at the Society of American Archivists Annual Meeting, Atlanta, GA, Aug. 2016.

Crisp, Samantha. "Creating the Bang, Measuring the Buck: Planning and Assessing Active Learning Exercises with Primary Sources." Presented at the International Federation of Library Associations and Institutions' Information Literacy Section Satellite Preconference, Chicago, IL, Aug. 2016.

Crisp, Samantha. "Digitizing Glass Plate Images from the John Hauberg Papers." Grant from the Illinois State Historical Records Advisory Board, IL, Aug. 2015 – June 2016.

Crisp, Samantha and Stefanie Bluemle. "A Little More Conversation, A Little More Impact: A Case for Collaboration in Special Collections and Information Literacy Instruction." Presented at the International Federation of Library Associations and Institutions' Information Literacy Section Satellite Preconference, Chicago, IL, Aug. 2016.

Croll, Paul. "Colorblind as a Subjective Identification Key Determinants, Connection to Ideology, and Implications for Racial Attitudes and Policy Preferences." Presented at the New Frontiers in the Study of Colorblind Racism Summit, Illinois Wesleyan University, Bloomington, IL, 12-14 May 2016.

Croll, Paul. "Whiteness and Colorblindness: Intersections, Overlaps, and Tensions." Presented at the New Frontiers in the Study of Colorblind Racism Summit, Illinois Wesleyan University, Bloomington, IL, 12-14 May 2016.

Croll, Paul. "Public Beliefs about the Black/White Socioeconomic Status Gap: What's Family Got To Do With It?" Presented at the Sociology Workshop Series, University of Minnesota, Minneapolis, MN, 13 Sept. 2016.

Croll, Paul, Douglas Hartman, Ryan Larson, Alex Manning, and Joseph Gerteis. "Colorblindness as Identity: Key Determinants, Relations to Ideology, and Implications about Race and Policy." Presented at the 2016 Annual Meeting of the Midwest Sociological Society, Chicago, IL, 24 Mar. 2016.

Daniels, Kelly. "A Friend of the Devil." *The Sun*. Apr. 2016: n.pag. Print.

Daniels, Kelly. "The Water Song." *The Sun*. Dec. 2016. Print.

Daniels, Kelly. "We Read Joan Didion in Order to Live: Five Writers on Learning from a Master." Panel hosted at the Association of Writers & Writing Programs Conference & Bookfair, Los Angeles, CA, 30 Mar.-2 Apr. 2016.

Daniels, Kelly. "How to Go Home Again: California Dreaming and the Reality of the California Memoir." Panel at the Association of Writers & Writing Programs Conference & Bookfair, Los Angeles, CA, 30 Mar. -2 Apr. 2016.

Daniels, Kelly. "Organic Form: Seven Steps to Finding Your Structure." Presented at the San Miguel Writer's Conference, San Miguel de Allende, Mexico, 11-15 Feb. 2016.

Davis, Ian Kivelin. "International News and the Distribution Question: China, Falun Dafa and Pluralism in Canadian Media Policy." *The Political Economy of Communication*. 2016: 85-105. Print.

Day, Kirsten. "Classical Allusions in 'Longmire'." Presented at the Classical Association of the Middle West and South (CAMWS) Annual Conference, Williamsburg, VA, 16-19 Mar. 2016.

Day, Kirsten. "Of Gods and Heretics: Classical Allusions and the Shaping of Character in Western Film." Presented in the Western Film area at the Film & History Conference, Milwaukee, WI, Oct. 2016.

- Day, Kirsten.** "Cowboy Classics: Ancient Epic and Western Film as Parallel Cultural Narratives." Presented at the Arkansas Humanities Council Annual Meeting, Hot Springs, AK, 2016.
- Domski, Greg and Franklin Ow.** General Chemistry. Toronto: Top Hat, 2016. Top Hat. Fall, 2016. <https://tophat.com/marketplace/generalchemistry>. Online.
- Edmondson, Michael.** "Major in Happiness: Debunking the College Major Fallacies." *National Association of Colleges and Employers (NACE) Journal*. Feb. 2016. Print.
- Egan, Mike.** "What I Really Learned in College: Holistic Learning Portfolios in a Residential Liberal Arts Setting." *AAEEL ePortfolio Review*. 2016.
- Finley, Janene R. and Wayne Finley.** "Volunteer Tax Assistance in Libraries." *The Library's Role in Supporting Financial Literacy for Patrons*. Ed. Carol Smallwood. Lanham, MD: Rowman & Littlefield, 2016: 317-26. Print.
- France, Margaret.** "Boys are from Mars, Girls are from Venus, I've got a Yum-Yum, Mom has a Penis: Gender-Blind Voice Casting in Bob's Burgers." Presented at the Pop Culture Association/American Culture Association National Conference, Seattle, WA, 22-26 Mar. 2016.
- France, Margaret, Mikey Poletto, Rebecca Kelly, and Sabrina Hill.** "SafeZone Training." Presented to the UIC College of Nursing, Moline, IL, 13 Sept. 2016.
- Ghinazzi, Connie and Amanda Makula.** "Much More than Storage: Re-positioning the Repository as a Cornerstone of Campus Collaboration." Presented at the Oberlin Digital Scholarship Conference, Macalester College, St. Paul, MN, 11 June 2016.
- Gillette, Meg.** "The Davenport Renaissance." Presented at the American Literature Association Annual Conference, San Francisco, CA, 26-29 May 2016.
- Goebel, Catherine.** "Whistler: A Life for Art's Sake by Daniel E. Sutherland." Reviewed for *The Journal of Pre-Raphaelite Studies*. Fall 2016: 92. Print.
- Goins, Sheila, Michael Cipriano, and Thomas S. Grucs.** "Private Information, Overconfidence and Trader Returns in Prediction Markets." *Journal of Prediction Markets*. 2015: 1-21. Print. (previously omitted from the 2015 citations)
- Gordon, Rupa Gupta, and Matthew Calamia.** "Neuropsychology." *Handbook of Assessment and Diagnosis of Autism Spectrum Disorder*. Ed. Johnny L. Matson. Gewerbestrasse: Springer International Publishing, 2016: 427-449. Print.
- Hahn, Lena.** "Fetal Tissue Viewing Practices at Independent Abortion Clinics in the United States: Key Findings from a Mixed-Methods Study." Presented at the American Public Health Association Annual Meeting, Denver, CO, 1 Nov. 2016.
- Hurty, Jon.** Guest Conductor. 2016 Heartland Voices Choral Festival. Huntley High School Performing Arts Center, Huntley, IL, 7 Apr. 2016.
- Hurty, Jon.** "Trends in Western Choral Music a capella Performance in the United States." Presented at Central China Normal University, Wuhan Shi, Hubei Sheng, China, Nov. 2016.
- Jaeschke, Frederick (Rick).** "Performance: Competition in the School Ensemble." *School Band & Orchestra*. 2016: 44-45. Print.
- Jakielski, Kathy J.** *Building Speech and Quantifying Complexity*. Pittsburgh: CASANA, 2016. Print.
- Jakielski, Kathy J., M. Gomez, P. McCabe, and A. Purcell.** "Treating childhood apraxia of speech: Evaluating the Kaufman Speech to Language protocol." Poster presented at the Annual Conference on Motor Speech, Newport Beach, CA, Mar. 2016.
- Jakielski, Kathy J., and L. Mitchell.** "Building Speech & Quantifying Complexity: A new approach for selecting speech goals and stimuli." Presented at the National Conference on Childhood Apraxia of Speech, Chicago, IL, July 2016.
- Jakielski, Kathy J. and A.C. Krantz.** "I'd like to buy a vowel: Increasing sound inventories in children with CAS." Presented at the National Conference on Childhood Apraxia of Speech, Chicago, IL. July 2016.
- Jakielski, Kathy J.** "Teaching children how to talk back." Presented at the Building a Brighter Future for Young Children Conference, Davenport, IA, Oct. 2016.
- Jakielski, Kathy J.** "A phonetic complexity approach to speech sound goal selection." Presented at the Building a Brighter Future for Young Children Conference, Davenport, IA, Oct. 2016.
- Jakielski, Kathy J., M. Gomez, P. McCabe, and A. Purcell.** "Treating childhood apraxia of speech: Evaluating the Kaufman Speech to Language protocol." Poster presented at the Annual Meeting of the American Speech-Language-Hearing Association, Philadelphia, PA, Nov. 2016.
- Jakielski, Kathy J.** Research Grant, "Bang for your Buck: A Systematic Investigation of Amount and Intensity of Practice in Treatment for Childhood Apraxia of Speech." P.I.: Edwin Maas, Temple University; Consultants: Kathy Jakielski, Augustana College; Christina Gildersleeve-Neumann, Portland State University; and Ruth Stoeckel, Mayo Clinics and Hospitals. January 2016-June 2017.
- Katz, Brian, and Elizabeth Thoren.** "Pt. 1: Illuminating Inquiry." *PRI-MUS*, 9 Dec. 2016: 1-7. Print.
- Katz, Brian, and Elizabeth Thoren.** "Pt. 2: Implementing Inquiry." *PRIMUS*, 12 Dec. 2016: 165-170. Print.
- Katz, Brian.** "On What Authority? – Considering Implicit Messages in Our Teaching." *American Mathematic Society Blog, "On Teaching and Learning."* 31 Oct. 2016 <<http://blogs.ams.org/matheducation/2016/10/31/on-what-authority-considering-implicit-messages-in-our-teaching/>>.
- Katz, Brian.** "Me and My Shadow: Teaching Students about Pedagogy." Presented at the MAA MathFest 2016, Columbus, OH, 3-6 Aug. 2016.
- Katz, Brian.** "Student-centered, Advanced Mathematics Courses." Presented for Project NExT at the MAA MathFest 2016, Columbus, OH, 3-6 Aug. 2016.
- Katz, Brian.** "How Do Mathematicians Believe?" Presented at the Fall 2016 Colloquia, James Madison University, Harrisonburg, VA, 14 Nov. 2016.
- Katz, Brian.** "Describing Mathematical Inquiry." Poster presented at the Inquiry-Based Learning Forum of MAA MathFest 2016, Columbus, OH, 3-6 Aug. 2016.
- Kaul, Adam.** "Performing Localness in The City of Strangers: Cosmopolitanism and Busking on the Streets of Galway." Presented at the 115th Annual American Anthropological Association Meeting, Minneapolis, MN, 18 Nov. 2016.
- Keehn, Samantha.** Performer, "Ferdinand David Concertino for Trombone and Orchestra." Clinton Symphony Orchestra, Sterling, IL, 24 Sept. 2016.
- Kivisto, Peter.** "The Civil Sphere beyond the Nation-State: Theoretical and Empirical Reflections on Alexander's Cultural Sociology and Its Contribution to Civil Society Discourse." *Globalizing Cultures: Theories, Paradigms, Actions*. Ed. Vincenzo Mele, Ed. Marina Vujnovic. Leiden: Brill, 2016: 66. Print.
- Kivisto, Peter.** "Historians and Sociologists Debate Transnationalism." *The Oxford Handbook of American Immigration and Ethnicity*. Ed. Ronald H. Bayor. Oxford University Press, 2016: 398-415. Print.

- Kivisto, Peter.** "International Migration." *Handbook of Religion and Society*. Ed. David Yamane, Springer, 2016: 547-568. Print.
- Kivisto, Peter.** *National Identity in an Age of Migration: The US Experience*. London: Routledge, 2016. Print.
- Kivisto, Peter.** "Labor Migration and the Unanticipated Consequences of Immigration Policy: The Case of the United States." *Labor Migration in the Context of Globalization: Challenges and Perspectives*. Ed. Arun Kumar Acharya, Ed. Bishnu Charan Barik, and Ed. Smith Verma. Universidad Autónoma de Nuevo León Press, 2016: 79-95. Print.
- Kivisto, Peter.** "Secularization, the Post-Secular, and Religious Pluralism." *The Futures We Want*. 2016, <<http://futureswewant.net>>.
- Kivisto, Peter.** "Transatlantic Comparisons: Analyzing Immigrant Integration in Six Countries," Introduction to a Symposium on *Strangers No More* by Richard Alba and Nancy Foner, *Ethnic and Racial Studies*, 2016 <<http://dx.doi.org/10.1080/01419870.2016.1203451>>.
- Kivisto, Peter.** "Integrating Immigrant Religions in Comparative Perspective." Presented at the International Sociological Association Forum, Vienna, Austria, 12 July 2016.
- Kivisto, Peter.** "Sociology, Political Science, and Immigration Studies." Presented at the International Sociological Association Forum, Vienna, Austria, 13 July 2016.
- Kovacs, Claire.** Digital version created for "Degas and Manzi's Vingt dessins: an Experiment Collaboration in Print." *SECAC Review*. 2016.
- Kovacs, Claire.** "Updates on Mapping Paris: Social & Artistic Networks, 1855-1889." Presented in the session "Digital Art History: New Projects, New Questions" at the College Art Association Annual Conference, Washington D.C., 3-6 Feb. 2016.
- Lovato, Brian.** *Democracy, Dialectics, and Difference: Hegel, Marx, and 21st Century Social Movements*. London: Routledge, 2016. Print.
- Magalhaes, Mariano, Indre Virsinskaite, and Anna Tegge.** "What do Brazilians Think about the Role of Women in Politics, Schools, and Business?" Presented at the North Central Council of Latin Americanists Conference, University of Wisconsin-La Crosse, La Crosse, WI, 4-5 Nov. 2016.
- Mahn, Jason.** *Becoming a Christian in Christendom: Radical Discipleship and the Way of the Cross in America's "Christian" Culture*. Minneapolis: Fortress Press, 2016. Print.
- Mahn, Jason.** *The Vocation of Lutheran Higher Education*. Ed. Jason Mahn. Lutheran University Press. 2016. Print.
- Mahn, Jason.** "Called Home." *Holden Village Voice*. Fall 2016: 11, 24. Print.
- Mahn, Jason.** "Bonhoeffer's Lutheran Christological Peace Ethic: Beyond the Realism-Pacifism Impasse." Presented at the American Academy of Religion Annual Meeting, San Antonio, TX, 19-22 Nov. 2016.
- Makula, Amanda and Connie Ghinazzi.** "Much More than Storage: Repositioning the Repository as a Cornerstone of Campus Collaboration." Presented at the Oberlin Digital Scholarship Conference, Macalester College, St. Paul, MN, 11 June 2016.
- Mason, Kelvin.** "Cthulhu Regio Outpost." Exhibited in the "New Horizons: a Pluto Print Exchange," University of the Arts, Philadelphia, PA, 8 Mar.-8 Apr. 2016.
- Mason, Kelvin.** "'Traveling Without Moving' behind-the-scenes look at special effects." Presented at the film's premier, Washington D.C., 28 Sept. 2016.
- Morris, Daniel A.** "'The Pull of Love': Mutual Love as Democratic Virtue in Niebuhrian Political Theology." *Political Theology*. 15 Feb. 2016: 73-90. Print.
- Morris, Daniel A.** "Liberated from the Liberator: Frederick Douglass and Garrisonian Political Theology." *Political Theology*, 24 June 2016. *Taylor & Francis*. Online.
- Morris, Daniel A.** "Public Forgiveness and the Unnamed Black Man: Subverting Media Rituals." Presented at the Midwest American Academy of Religion Conference, Muncie, IN, 1-2 Apr. 2016.
- Morris, Daniel A.** Refereed Blog Post, "Love, Justice, and the Trump Victory" *PBS Religion & Ethics Newsweekly* (11/16/2016) <http://www.pbs.org/wnet/religionandethics/2016/11/16/daniel-morris-love-justice-trump-victory/33410/>.
- Morris, Daniel A.** Refereed Blog Post, "'Natural Law' Arguments Against Same-Sex Marriage Break Down in Face of Evidence" *Political Theology Today* (7/21/2016) <http://www.politicaltheology.com/blog/natural-law-arguments-against-same-sex-marriage-break-down-in-face-of-evidence/>.
- Morris, Daniel A.** Refereed Blog Post, "Class, Race, and Democratic Life: How to Read Niebuhr in 2016" *Political Theology Today* (3/7/2016 and 3/14/2016) <http://www.politicaltheology.com/blog/class-race-and-democratic-life-how-to-read-niebuhr-in-2016/> (link to part one of two).
- Morris, Daniel A.** Book Review of H. Richard Niebuhr. *The Paradox of Church and World: Selected Writings of H. Richard Niebuhr*. Edited by Jon Diefenthaler. Minneapolis, M.N.: Fortress Press, 2015. In *Journal of Lutheran Ethics* 16, no. 7 (July/August 2016): <https://www.elca.org/JLE/Articles/1171>.
- Morris, Daniel A.** Book Review of Reinhold Niebuhr. *Reinhold Niebuhr: Major Works on Religion and Politics*. Edited by Elisabeth Sifton. New York, NY: Library of America, 2015. In *International Journal of Public Theology* 10, no. 3 (January 2016): 404-406, doi: <https://doi.org/10.1163/15697320-12341457>.
- Morse, Margaret.** "The Renaissance Portrait in the Domestic Context: Family, Faith, and Social Prestige." Presented at the Midwest Art History Society Annual Conference, Chicago, IL, 7-9 Apr. 2016.
- Nodulman, Jessica A.** "'Put me in, coach, I'm ready to play': sexuality education for adults at *Good Vibrations*." *Sex Education*, DOI: 10.1080/14681811.2016.1165196, 30 Mar. 2016. 5 Apr. 2016 <<http://dx.doi.org/10.1080/14681811.2016.1165196>>.
- Nordling, Jamie K., Lea J. Boldt, Jessica O'Bleness, and Grazyna Kochanska.** "Effortful control mediates relations between children's attachment security and their regard for rules of conduct." *Social Development*. May 2016: 268-284. Print.
- Nordling, Jamie K.** "Investigating and intervening: Understanding the role of the parent-child relationship in children's socialization." Presented as the Keynote Speaker at the Annual River Bend Psychological Association Student Research Conference, Moline, IL, Jan. 2016.
- Nordling, Jamie K., and Kayla Jackson.** "The downstream benefits of positive parenting in the development of social competence." Presented at the IX Encuentro Internacional de Estudiantes de Psicología (IX International Meeting of Psychology Students), Havana, Cuba, 28 Oct. 2016.
- Oliver, Tony.** Featured Performer, "Signature Series4: The Beaten Path - Members of the Quad City Symphony Orchestra Percussion Section." Rock Island, IL, 3 May 2015. (previously omitted from the 2015 citations)
- Oliver, Tony.** Guest Director, QCSYE Percussion Ensemble, Quad City Symphony Youth Ensembles Fall Concert, Rock Island, IL, 1 Nov. 2015. (previously omitted from the 2015 citations)
- Sattar, Fatima.** "Comparing the Host to the Homeland: Iraqi and Darfuriyan Refugees' Perceptions of U.S. Resettlement." Presented at the Social Science History Association Annual Meeting, Chicago, IL, Nov. 2016.
- Schafer, Kevin.** Display of Works at QC Arts, Rock Island, IL, Sept.-Oct. 2016.

- Schultz, Jessica M., and J. Kettmann.** "We're in this together: Using a collaborative community-based conference to promote undergraduate research." Poster presented at the Society for the Teaching of Psychology Annual Conference on Teaching, Atlanta, GA, Oct. 2016.
- Schultz, Jessica M.** "Thriving in your work: Tools from the psychology of happiness." Workshop presented at the Iowa Corrections Association Conference, Davenport, IA, May 2016.
- Schusseim-Anderson, Rowen.** "Synergetic 7." Displayed in *48th CLAY, FIBER, PAPER, GLASS, METAL, WOOD*, Octagon Center for the Arts, Ames, IA, 29 Jan.-2 Apr. 2016.
- Schusseim-Anderson, Rowen.** "Rowen Schusseim-Anderson; The Butterfly Series." Exhibited at BlackHawk College, Moline, IL, 14 Mar.-8 Apr. 2016.
- Schusseim-Anderson, Rowen.** Work juried into "Threads: A Sampling of Fiber Art." Exhibited in the John Dennis Murray Arts Building at the Smithsonian's AnnMarie Sculpture Garden, Solomons, MD, Mar.-July 2016.
- Schusseim-Anderson, Rowen.** "Tapestry Exhibition: Rowen Schusseim-Anderson: Fiber Intersections." Exhibited at the Bereskin Fine Art Gallery and Studio, Davenport, IA, 27 May-17 June 2016.
- Schusseim-Anderson, Rowen.** Work juried into "American Tapestry Biennial 11." Exhibited in the South Bend Museum of Art, South Bend, IN, July - Sept. 2016.
- Schusseim-Anderson, Rowen.** Work juried into "American Tapestry Biennial 11." Exhibited in the Mulvane Art Museum, Washburn University, Topeka, KS, Nov.-Dec. 2016.
- Smith, Marsha.** "Receding Glaciers, Empty Lakes: How climate change is impacting tourism in Lijiang China and what can be done?" Presented on the panel "Under the Dome: Local & Global Concerns about China's Environment," St. Petersburg, FL, 5 Mar. 2016.
- Stewart, Eric.** "We'll Make a Man out of You Yet: Peter's Masculinity in the Acts of the Apostles." *Hervormde Teologiese Studies*. 72.4 2016. Print.
- Stewart, Eric.** "BTB Reader's Guide: Masculinity in the New Testament and Early Christianity." *Biblical Theology Bulletin* 46.2 2016: 91-102. Print.
- Stewart, Eric.** Review of Ovidiu Creăngu and Peter Ben-Smit's, "Biblical Masculinities Foregrounded." *Biblical Theology Bulletin* 46.4 2016: 222-223. Print.
- Stewart, Eric.** Review of James Crossley's, "Jesus in an Age of Neoliberalism: Quests, Scholarship, Ideology." *Journal of the American Academy of Religion* 84.1 2016: 269-71. Print.
- Stewart, Eric.** Response to Andries van Aarde, "'By Faith Alone' in Light of Change Agency Theory: Jesus, Paul, and the Jesus-Group in Colossae." Presented at the 30th Annual Meeting of the Context Group, Portland, OR, Mar. 2016.
- Stonedahl, Forrest and Andrew Sward.** "Gotta catch 'em all: Pursuit curves for accelerating prey." Presented at MAA Mathfest, Columbus, OH, 3-6 Aug. 2016.
- Stough, Shara, L. Nguyen, P. Strell, and S. Todorov.** "NeurdFest." Poster presentation at the Society for Neuroscience Annual Meeting, San Diego, CA, 12-16 Nov. 2016.
- Stough, Shara.** "Research on Social Transmission of Fear in Young Chickens." Poster presentation at the Society for Neuroscience Annual Meeting, San Diego, CA, 12-16 Nov. 2016.
- Strunk, Christopher.** "Practicing Citizenship: Bolivian Migrant Identities and Spaces of Belonging in Washington, DC." *National Identity in an Age of Migration: The US Experience*. London: Routledge, 2016. 620-639. Print.
- Strunk, Christopher.** "Urban gardens, migrant incorporation, and civic agriculture in the West End of Rock Island." Presented at the Social Science History Association Conference, Chicago, IL, Nov. 2016.
- Sward, Andrew and Forrest Stonedahl.** "Gotta catch 'em all: Pursuit curves for accelerating prey." Presented at MAA Mathfest, Columbus, OH, 3-6 Aug. 2016.
- Tapis, Gregory.** "Why Are You Not a CPA?" *Journal of Accountancy* Feb. 2016: n. pag. Print.
- Tapis, Gregory, Thomas Z. Webb and Spencer C. Usrey.** "Exam Boot Camps: Promoting Professional Designations and Career Success." Presented at the American Accounting Association Annual Meeting, New York, 6-10 Aug. 2016.
- Tapis, Gregory, and Spencer C. Usrey.** "Religion, Politics, and Sin Taxes." Presented at the Rocky Mountain Academy of Legal Studies in Business (RMALSB) Annual Meeting, Vail, CO, 30 Sept.-2 Oct. 2016. **Winner of the RMALSB Best Paper Award**
- Tapis, Gregory, and Kanu Priya.** "Why would I put my money in my mouth? Metaphors, analogies, and proverbs...Am I getting lost in translation? Teaching business disciplines to international students in the classroom." Presented at the Rocky Mountain Academy of Legal Studies in Business (RMALSB) Annual Meeting, Vail, CO, 30 Sept.-2 Oct. 2016.
- Xiao, Peter T.** "Cun Xin Bai Tuo Shu Fu (Freeing Myself of Restraints by Design)." *Mingbao Monthly*. Dec. 2016. Print.
- Xiao, Peter T.** "Zi Xing." Cover art for *Mingbao Monthly*. Dec. 2016. Print.
- Xiao, Peter T.** "39th Annual Rock Island Fine Arts Exhibition." Figge Art Museum; juror: Julie Rodrigues Widholm, Davenport, IA, 2016.
- Yaschur, Carolyn, and Dan Cortis.** "Good crop, bad crop: Composition and visual attention in photojournalism." Presented at the Association for Education in Journalism and Mass Communication, Visual Communication Division, Minneapolis, MN, August 2016.
- Yaschur, Carolyn, and Renita Coleman, Joon Yea Lee, Aimee Meader, and Kathleen McElroy.** "Why be a journalist? US students' motivations and role conceptions in the new age of journalism." *Journalism: Theory, Practice and Criticism*. 2016: 1-20. Print.
- Zhang, Xiaowen.** "The Reemerging Concern over Urban Air Pollution: To what extent does the government shape today's public opinion in China?" Presented on the panel "Under the Dome: Local & Global Concerns about China's Environment," St. Petersburg, FL, 5 Mar. 2016.

STUDENT HONORS AND AWARDS

(FIRST-YEARS, SOPHOMORES AND JUNIORS)

ACCOUNTING

Augustana Accounting Association Scholarship

Ian Steigerwald
Nicholas Uhrir

RSM Scholarship

Carter Amundsen

Arthur Andersen Scholarship

Derek Biliskov
Thao Chu
Brianna Haney
Thuy Trang Le
Yemurai Mapurisa
Dylan Mizaur
Nicholas Mosele
Mai Nguyen
Michael Powers
Jacob Schoeck
Michael Sheets

S. James Galley Scholarship

Michelle Alano
Victoria Allen
Jacob Barr
Courtney Becker
Allison Blaisdell
Robert Blassingham
Thao Chu
Sarah Crawford
Kate Didier
Mahvish Fatima
Cassidy Foley
Paige Fornek
Korina Freidag
Alexander Hinrichs
Jessica Holzknrecht
Kyle Hucker
Michael Lawson
Randolph Leslie
Mollie Magee
Mitchell Malone
Nicholas Niles
Daniel Olinger
John Sagen
Hnin New Soe
Taylor Vaughan
Victor Velazquez
Devin Wolter
Kexin Xu

KPMG Peat Marwick Scholarship

Victor Velazquez

Bill Mele Scholarship

Carter Amundsen
Rachel Anderson
Kate Didier
Kyle Hucker
Lauren Krueger

Deere & Company Scholarship

Michael Hickey

BUSINESS ADMINISTRATION

Harold E. and Louise Lage Swanson Scholarship

Michelle Alano
Victoria Allen
Carter Amundsen
An Dang
Kate Didier
Korina Freidag
Zachary Gray
Michael Hickey
Jessica Holzknrecht
Daniel Janus
Mitchell Johnson
Tien Le
Huyen Le
Mitchell Malone
Ryan Mueller
Duc Anh Nguyen Ngoc
Nicholas Niles
Jonah Puls
Victor Velazquez
Devin Wolter

Thomas C. Montgomery Memorial

Scholarship

Rachel Anderson
Derek Biliskov
Tyler Burns
Thao Chu
Shannon Domski
Katelyn Farrell
Emily Graziano
Brianna Hanes
Brianna Haney
Anthony Hante
David Jones
Thuy Trang Le
Dylan Mizaur
Nicholas Mosele
Trang Ngo
Mai Nguyen
Jacob Schoeck
Michael Sheets
Andrew Silverman
Ian Steigerwald
Alexander Swatek
Nicholas Uhrir

CHEMISTRY

Albert L. Eliason Chemistry Endowed Scholarship

Dat Tran

First-Year Chemistry Achievement Award (2015-16)

Alfred Dei-Ampeh

CLASSICS

Eta Sigma Phi Honorees National Classics Honor Society

Jordan Brown
Taylor Hayes

COMMUNICATION STUDIES

Multimedia Journalism and Mass Communication

Illinois College Press Association Awards

LuAnna Gerdemann
Marlen Gomez
Janie Le

ECONOMICS

Bruce R. Milligan Endowed Scholarship

Michael Hickey
Huyen Le
Michael Partyka
Indre Virsinskaite
Zineb Zirari

Thomas C. Montgomery Memorial

Scholarship

Zachary Carlson
Bethany Koch
Mai Nguyen
Nicole Travis
Ziou Zhang

ENGLISH

Tom and Wanda Hanson Scholarship in

English Studies

Allyson Jesse

GEOLOGY

Dr. C. Leland Horberg Scholarship

John Malone
Allison Pease
Joseph Teresi

Joseph M. Hoare Endowed Scholarship in

Geology

Mark Lundine

Sigma Gamma Epsilon: The National Honor Society for the Earth Sciences

Gustav Benson
Bethany Hobart
Sierra Kindley
Caitlin Lebel
Nicholas Misner
Sarah Oswald
Allison Pease
Chad Populorum
Madison Vandersee

MATHEMATICS AND COMPUTER SCIENCE***Pi Mu Epsilon, National Honorary
Mathematics Society***

Allan Daly
Mark Lundine
Alyssa Nestor
Zineb Zirari
Dat Tran
Samuel Totten
Mitchell Johnson
Lan Dang
Jack Cannell
Braden Isbell

MUSIC***Louise Nathanson Applied Lesson Award***

Amanda Esparza
Rebekah Gohl
Monica Gil
Bets Hobart
Joshua Lyer
Denzel Woodall

Class Honors for Pi Kappa Lambda

Rebekah Gohl
Kathryn Krajewski
Joshua Lyer
Amber Mraz

RELIGION***Floyd and Louise Anderson Fund for
Excellent in Religious Studies***

Hannah Griggs

THEATRE ARTS***Judith Katz Memorial Theatre Scholarship
Award***

Tristan Odenkirk

**WORLD LANGUAGES, LITERATURES,
AND CULTURES****Asian Languages:*****Outstanding Academic Achievement Award
in Chinese***

Olivia LaPlante
Quintin Sebben

German and Scandinavian Studies:***Delta Phi Alpha, the German Honorary
Society***

Jessica Hammond
Marissa Neradt
Christine Rogers
Alexander Swatek

Freistat Student Language Award

Austin Allbert
Ramona Collins
Jennifer Darby
Cassie Dohrman
Jonathan Hanson

Jeraldine Hernandez
Bethany Koch
Lydia Lara
Erin LaRusso
Kaitlin Lewallen
Autumn Loucks
Giselle Loucks
Brandi Mertig
Emma Nordmeyer
Elsie Ocampo
Kim Pham
Reilly Siepka
Kyle Straznickas

**Freistat Center Student-Faculty
Fellows On-Site Undergraduate Research**

Victoria Nelson
Olivai Zolnik

Freistat Student Conference Award

Karina Huerta
Isabel Valle

**Freistat Center Peace and Justice Studies
Award**

Jackie Kwasigroch

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Mourin Azar
Grant Bracken
Allison Brinker
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Lawrence Catalan
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John Hallmark
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Ashton Hutcheson
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Jessica Joerger
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Anthony Steinle
Anna Tegge
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Braden Isbell
Zachary Schrank


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Brix Clayton
Mark Curtis
Erin Cygan
Loretta Dantuma
Lauren Endress
Carol Garcia
Jessica Hammond
Brianna Hillyer
Sarah Litwin
Maxwell Maharry
Ila Mostafa
Mitchell Mulcahy
Catherine Priebe
Emma Samatas
Taylor Setterlund
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2017-18
Symposium Days

THURSDAY, SEPTEMBER 28

WEDNESDAY, JANUARY 17

WEDNESDAY, MAY 2:
Celebration of Learning