

# 2019 URSCI Expo and Global Learning Symposium

## Abstracts

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## Degree with Distinction and Honors Project Presentations

### Honors Project Presentation (11:30 a.m. – 12:20 p.m., 115 Parmer Hall)

URSCI Summer Scholar 2018

ExcEL Scholar

Art History

**Natalie Bobrowska**

*A Brief Manual on How to Ethnically Exhibit Native American Art and Artifacts*

Kim Theriault

Historically, mainstream American institutions have been presenting Native American objects in outmoded and often disrespectful ways because of age-old European display and exhibition standards. These standards often promote the misuse, misunderstanding, and misappropriation of cultural and sacred objects. This presentation will highlight six issues that museums currently need to address because of unsustainable and out-of-date display methods of Native American art and objects. It will also enumerate solutions and alternatives that museums can apply in an effort to remedy the controversial situation.

### Degree with Distinction Presentation (9:30 – 10:20 a.m., 108 Parmer Hall)

Psychology

**Gabrielle Huxhold**

*Exploring the Relationship Between Bullying and Alcohol Abuse in College Students*

Tina Ritzler

Previous research has shown that being a victim of bullying at school predicts alcohol usage. Research conducted by the University of Illinois at Chicago by Rospenda, Richman, Wolff and Burke (2013) found that for college students, bullying at school and at work were associated with higher levels of alcohol abuse. These results show that there is a correlation between these constructs; alcohol consumption increases with being a victim of bullying. The current study replicated Rospenda et al.'s (2013) study by investigating the extent of bullying that occurred in a school setting and the direction and strength of the relationship of school bullying to alcohol consumption in undergraduates at Dominican University. In addition, to extend Rospenda et al.'s research, the current study also investigated the relationship between bullying and alcohol consumption after controlling for the effects of negative affect, narcissism, and neuroticism. IRB number: 2018.284

### Honors Project Presentation (10:30 – 11:20 a.m., 108 Parmer Hall)

Biology

**Sebastian Lorenzo**

*Pain and How to Treat It*

Margaret Jonah

Providing pain relief is one of the most vital jobs for a person in the field of healthcare. A patient's feeling of pain, especially chronic pain, can produce many adverse physical consequences. Chronic pain is most often defined as consistent pain lasting more than twelve weeks and is very different from acute pain. Although management of chronic pain can be an individualized experience, many common factors among

patients have been described. It is these consistently occurring factors that my study has investigated. This report will describe different methods of patient recovery that I was able to observe during my internship at the office of the neurosurgeon, Dr. Leonard Cerullo. I will describe how certain methods are more, or less, effective in certain situations. I will also discuss to what extent, if any, the circumstances behind the chronic pain influences the treatment plan.

**Degree with Distinction and Honors Project Presentation (12:30 – 2:20 p.m., 115 Parmer Hall)**

Italian

**Giacomo Polinelli**

*Aristotle and Dante: How Greek Philosopher influenced Italian Masterpiece*

Tonia Triggiano

More than sixteen centuries separate the *Nicomachean Ethics* from the *Commedia*, and seven more the latter to modern society. Despite this, Aristotle and Dante are two of the most well-known authors in the world. In the *Ethics* the Greek philosopher proposes a method so that anyone can live virtuously and eventually achieve happiness. In the *Commedia*, it seems that Dante is simply describing his personal vision of the afterlife. This essay aims to explain through a careful study of these two works, how Aristotelian philosophy influenced the *Commedia* and in particular the first volume, *Inferno*. For this reason, once the literal veil is lifted, the Dantean masterpiece can be read in allegorical terms. This essay will demonstrate how the *Commedia*, like the *Ethics*, instructs its reader how to live on earth.

**Degree with Distinction and Honors Project Presentation (1:30 – 2:20 p.m., 115 Parmer Hall)**

English

**Maria Powell**

*Exploring Lilith as a Feminist Figure: Using Fiction as a Source for Theology*

Warren Green and Anthony Suarez-Abraham

“A Woman in the Garden” is a retelling of the Lilith narrative who, in Midrashic literature, is Adam's first wife. In the source stories, Lilith refuses to submit to Adam and escapes their nascent relationship. Adam's response is to demand that G-d return his wife to him. Ultimately, Lilith refuses to return and G-d makes Eve as consolation. The novel utilizes a similar plot, including Lilith's betrothal to Adam, but freely explores the dynamics of their relationship through their perceived need/responsibility to keep their people from diminishing amidst a war with demonic shadows. When Lilith enters "The Wilderness" to save a sister, Adam follows, after which they find themselves in a struggle for control of their quest. In the end, Lilith's search for truth and Adam's pride force a crisis, revelation, and ultimately both sacrifice in a sort of victory/twist. In coordination with a clip from the documentary "Lilith: Iconic/Demonic" - which served as the germinal project leading to the Lilith narrative - the presentation will include readings from the novel-in-progress and discussion of theology questions at the heart of the work.

**Degree with Distinction and Honors Project Presentation (1:30 – 2:20 p.m., 108 Parmer Hall)**

History

**Lisa Quintero**

*20 Stories from 20 Years*

Aly Drame

A combination of historical scholarship and creative writing, this project uses historical fiction to tell the stories of often overlooked historical events and people. These stories span from the 18th to the 20th centuries, take place in various countries, and cover themes like gender, sexuality, racism, classism, and colonialism. The historical scholarship of this project argues that despite the objections to this genre, historical fiction is a legitimate form of historical study, can reach a broader audience than academic research, and can create an emotional connection that academic scholarship cannot.

**Honors Project Presentation (11:30 a.m. – 12:20 p.m., 108 Parmer Hall)**

English

**Jasmine Whiteside**

*A Discussion and Reading of The Inquisitor's Daughter*

Maggie Andersen

Jodi Cressman

The presentation of *The Inquisitor's Daughter* will include a brief history of the questions from which the idea for the novel-length story arose and how these questions manifested into a work that explores the power of man to dictate the fate of others, the moral capacity and judgment of humans, and how those in power practice selective condemnation and justice. The presenter will also discuss the four-year evolution of the work and the developing process as a writer. Following this, the presenter will conduct a reading of the first chapter of the work and end with a question and answer session.

## Contributed Oral and Poster Presentations

The listing is organized by discipline, in alphabetical order.

### Art, Art History and Design

#### Art - Oral Presentation (2:30 – 2:25 p.m., 108 Parmer Hall)

**Carlos Javier**

*Under the Influence: Color & Sound in Cinema*

Javier Carmona

Filmmakers manipulate our emotions through various ways, but color and sound are most prominent factors. Through the study of various “colorful” film such as Blade Runner 2049, Hotel Chevalier and Grand Budapest Hotel, and through the sound design of Psycho, Jaws and The Shining, we discover exactly how color and sound can manipulate our emotions. Movies stir up emotions you may not realize, whether through the continuous color on screen or even as small as the musical score that accompanies it.

#### Art History I - Oral Presentation (10:30 – 10:55 a.m., 115 Parmer Hall)

**Alice Arreola**

*The Mexican Theft of the Century*

Kim Theriault

This thesis discusses the 1985 robbery of the National Museum of Anthropology in Mexico City. Labeled “the robbery of the century”, many Mexican officials stated that the thieves not only robbed the museum, but also the Mexican people and their culture. Using the three of the most valuable pieces stolen as case studies, this paper will determine the true significance of the objects to Mexican culture, both through examining the methods of their display and considering the local responses to their removal from their original sites, in an attempt to evaluate the ethics of Indigenous Art acquisitions made by Mexican museums.

#### Art History II - Oral Presentation (11:0 – 11:25 a.m., 115 Parmer Hall)

**Alyssa Roen**

*Blurring the Line: Contemporary Photographers, Private Spaces, and the Question of Voyeurism*

Kim Theriault

Photographers Gail Albert-Halaban, Arne Svenson, and Michael Wolf share a commonality—they aim their camera lenses out of their windows and into the lives of their neighbors. Outside of the context of art, these works could be considered voyeuristic; peeping into the private spaces of unaware strangers. However, by actively arranging their compositions within the formal structures of urban settings, Albert-Halaban, Svenson, and Wolf create an intermediary space that detaches themselves from the role of the voyeur and places it onto the viewer instead.

#### Art History III - Oral Presentation (12:30 – 1:20 p.m., Lewis Hall)

**Catherine Kessuvan**

*The Introspective Process of Repetition: An Exhibition of Two Alumni Artists*  
Kim Theriault

This Art History Senior Thesis project consists of curating the work of two abstract painters, Grant Newman ('07) and Sarah Rehmer ('03). The nonrepresentational nature of their pieces, full of repetitive shapes and patterns, function as personal records of their lived experiences. The exhibition of their work highlights and explores the connection between self-reflection and artistic exploration. The purpose of my exhibition is to celebrate professional artists who began their careers here as undergraduates. Displaying artists that continue to make art professionally after they graduate is meant to be informative, encouraging, and inspiring to current students, as well as promote an understanding of contemporary art.

## Biology

### Biology - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)

URSCI Undergraduate Research Assistantship

**Everett Krause, Tania Rosiles**

*Transcriptional changes before and after forgetting of a long-term sensitization memory in *Aplysia californica**

Irina Calin-Jageman

Most long-term memories are forgotten, becoming progressively less likely to be recalled. Still, some memory fragments may persist beyond forgetting, as savings memory (easier relearning) can persist long after recall has become impossible. What happens to a memory trace during forgetting that makes it inaccessible for recall and yet still effective to spark easier re-learning? We are addressing this question by tracking the transcriptional changes that accompany learning and then forgetting of a long-term sensitization memory in the tail-elicited siphon withdrawal reflex of *Aplysia californica*. Our results provide the first evidence of transcriptional fragments of a learning experience that persist far beyond the decay of recall.

### Biology - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)

**Sarah Odeh**

*Microbial Diseases of the Eye*

Margaret Jonah

The eye is the most important organ of sense. Although the eye is protected by its structure and natural anti-bacterial secretions, microbes can invade the eye and cause infections. Topics to be covered will include normal anatomy of the eye, microbial eye diseases, and common causes of eye infections. Some treatment and prevention methods for eye infections, if any, will also be discussed.

## Chemistry

### Chemistry - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)

**Areli Aragon, Andrew Bromir, Kamren Carey, Catherine Cho**

*The Harmful and Helpful Effects of Subxone*

Daniela Andrei

Our presentation will discuss the two components that make up the drug Suboxone. Suboxone is a medication that is prescribed to patients that suffer from opioid addiction. However, it is widely abused and highly addictive in itself. We will be discussing how the two components: Buprenorphine and Naloxone, work in the human body on a biological level while referring to the chemical makeup of the drugs. Buprenorphine is an opioid analgesic that acts on opioid receptors to produce morphine-like effects used in pain relief or anesthesia. Naloxone is known as an opioid antagonist, also known as an opioid blocker. When naloxone is injected into the bloodstream, an individual or patient who is dependent on opioids will begin to have uncomfortable withdrawal symptoms. Naloxone has become a lifesaving innovation but it has also led to moral hazard. From the time that Naloxone was made easier to get, such as in the form of Suboxone, opioid-related crimes and ER visits have increased and opioid related deaths have increased by 14% in the Midwest.

**Chemistry - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)**

**Hannah Gordon, Adrian Gubala, Johnny Geraci, Stephanie Gonzalez**

*Green Fluorescent Protein as Gene Markers*

Daniela Andrei

The green fluorescent protein (GFP) is a small protein composed of 238 amino acids that exhibits bright green fluorescence when exposed to light. This protein was first isolated from the jellyfish *Aequorea victoria*, and has since become a common tool for studying biological processes. Before the discovery of GFP, dyes were used to mark cells, but ended killing these cells. Unlike dyes, GFP is the perfect tracer molecule because it is small, easy to detect, and fluoresces without the addition of chemicals. Because substrates and cofactors are not required for this fluorescence, GFP expressions can be used to monitor gene expression. The GFP gene can be inserted to promoters of a gene in another organism. RNA polymers bind to the promoter regions to initiate transcription. Once transcribed, GFP is able to attach to other proteins and mark them with through fluorescence, allowing a protein to be observed through fluorescence microscopy.

**Chemistry - Poster Presentation (10:30 – 11:30, Parmer Atrium)**

**Allyson Nguyen, Elin Ream, Alexandra Rivera, Chris Vazquez**

*Melatonin's Effect on Everyday Life*

Daniela Andrei

Melatonin is a hormone produced in the body that plays a role in sleep. The production and release of this hormone in the brain is related to the time of day. It rises in the evening and falls in the morning. In this poster presentation, we will be discussing the different benefits melatonin has on the body and the effects lack of melatonin can have on a person. We will be going in depth on insomnia, shift work disorder, jet lag and other conditions researchers are using melatonin for to see any of its benefits and or affects.

**Chemistry - Poster Presentation (10:30 – 11:30, Parmer Atrium)**

**Lilian Gulyk, Richard Hekimyan, Kristina Ivanova, Khrystyna Krykhovetska**

*Biotin*

Daniela Andrei

In this poster presentation we will be discussing the biological importance of Biotin. We will discuss its basic functions and new ways that it can be used to benefit people. Biotin is part of the B complex group of vitamins which is important to bacteria and humans. This vitamin is capable of giving us soft skin and it is also capable of curing hair loss, soft nails, and dermatitis. Biotin is essential because it is found in foods and helps with diets. It helps convert foods to the needed energy. It is also a water-soluble vitamin which helps with histone modifications, gene regulation, and cell signaling. Biotin is a small organic molecule, coenzyme, that binds with pyruvate carboxylase during gluconeogenesis reaction. Pretargeted radioimmunotherapy specifically targets radiation to tumors using antibody streptavidin conjugates followed by radiolabeled biotin. Endogenous biotin can block the biotin-binding sites of the antibody. Researchers have worked to find the best derivatives of biotin that can be applicable to therapeutic or diagnostic systems where endogenous biotin acts as an interference. In the last few years there has been growing interest in the use of biotin as a form of treatment for people suffering from progressive multiple sclerosis. There are studies that support its benefit to people with these illnesses. Additional studies testing the effectiveness of MD1003 are currently underway.

**Chemistry - Poster Presentation (10:30 – 11:30, Parmer Atrium)**

**Kayla Davis, Monica Duron, Angela Espy, Victor Feliciano**

*Performance-enhancing Drugs*

Daniela Andrei

Our interest in this topic grew from a conversation about the unfair advantage athletes have over their fellow competitors when they use alternative means of performance enhancement. Two common ways athletes enhance their performance without training or practice are through blood doping and the use of anabolic steroids. Both of these methods of performance enhancement are illegal without a medical prescription. However, some of the world's most famous athletes have used these performance-enhancing methods to reach exemplary status in the world of professional sports. This poster will explore the effects of performance-enhancing drugs, how they are used, and why they have been banned in the majority of professional competitive sports.

**Chemistry - Poster Presentation (10:30 – 11:30, Parmer Atrium)**

**Sydney Kuderna, Estephania Lemus, Austin Michals, Justyna Natkaniec**

*Fentanyl: Uses and Side Effects*

Daniela Andrei

Fentanyl is an opioid narcotic generally used in the treatment of severe pain. It is an analgesic nearly 1000 times stronger than morphine, as well as 50-100 times more potent than morphine. There have been many derivatives of fentanyl discovered, but the general structure of fentanyl-based analgesics includes two aromatic rings and an amide group. As an opioid, fentanyl attaches to opioid receptors in the brain, raising levels of dopamine in the blood, ultimately creating a euphoric feeling in the body. Physician prescribed fentanyl is often administered through injection, and for long-term chronic pain, lozenges and patches. It has been found that an average dose of 180 micrograms is a relatively safe dosage in emergency response situations. Doses higher than this can cause nausea, hives, and a slowing of breathing. Due to the pain relief and euphoric feeling fentanyl creates, street usage of the drug has increased, often mixed with heroin. High doses of fentanyl can be particularly dangerous, and fentanyl is very easy to overdose on, as the narcotic can slow breathing to a point that can ultimately cause death. Use of alcohol with fentanyl can increase these effects, as well as decrease blood pressure. To counteract

this effect, naloxone is generally prescribed. This can quickly reverse the effects of fentanyl by binding to the same opioid receptors in the brain.

**Chemistry - Poster Presentation (11:30 – 12:30, Parmer Atrium)**

**Madison Fette, Victor A Jimenez, Christopher Vazquez**

Hexagonal Boron Nitride-based Polymer Nanocomposites

Amartya Chakrabarti

Polymer nanocomposites are modern day materials that have gained much attention in the field of science and technology for their excellent mechanical, electrical, thermal and chemical properties. They are now finding applications in a variety of industrial sectors including electronics, packaging, energy, biomedicine and much more. Polymer nanocomposites are unique in the way that they have nanofiller additives dispersed in the polymer matrix to achieve enhanced properties. Hexagonal boron nitride (h-BN), also referred to as “white graphene”, is one of the most sought-after choices among the different nanofiller additives that are available. h-BN is preferred due to its high chemical and thermal stability and excellent thermal conductivity. There are different morphologies of h-BN currently being produced in the respective nanoforms. In this presentation, we are going to discuss recent synthetic strategies to produce h-BN nanostructures and manufacturing of h-BN-based polymer nanocomposites, and also offer a different approach in manufacturing these polymer nanocomposites. Along with this, a comparative discussion between boron nitride and graphene will be included. Furthermore, applications of h-BN-based polymer nanocomposites will be reviewed.

**Chemistry - Poster Presentation (11:30 – 12:30, Parmer Atrium)**

**Khrystyna Krykhovetska**

*Diels Alder Reaction in Various Solvents*

Brent J.Friesen

The Diels Alder reaction between anthracene and maleic anhydride in refluxing xylene has been a fixture in Sophomore Organic Chemistry laboratory experiments for several decades. This study followed the course of this 4+2 cycloaddition reaction by HPLC-UV and quantitative NMR in at least a dozen solvents with boiling point ranges between 100 and 200 oC. While reflux temperature may play a role in the kinetics and completion of the Diels Alder reaction, the characteristic solvent functional groups were also an important consideration. Generally, the reaction proceeded slowly without completion in alcohol solvents (ethyl lactate being an exception). High boiling point ethers such as diglyme generally gave 90% completion within one hour. Polar aprotic solvents such as DMSO, DMF, and DMA gave mixed results. This study breathes new life into an established Sophomore Organic Chemistry laboratory experiment by introducing a research rich aspect to the data obtained from the procedure.

**Chemistry - Poster Presentation (11:30 – 12:30, Parmer Atrium)**

**Torrell Maybon, Blaise Ndiwe**

*Enzyme Kinetics and Inhibitors of Acetylcholinesterase*

Brent J.Friesen

Acetylcholinesterase (AChE) is the enzyme that breaks down the neurotransmitter, acetylcholine in the cholinergic nerve synapse. AChE is an important therapeutic target because inhibition of the enzyme

effectively enhances the effect of acetylcholine. The AChE enzyme kinetics were studied with the Ellman colorimetric assay. Several commercially available synthetic compounds were tested for their ability to inhibit AChE. This series of tests allowed the structural characteristics of AChE inhibitors to be identified and the dose-response behavior of select inhibitors to be observed. For example, a 2.3 nM solution of 9-Amino-1,2,3,4-tetrahydroacridine exhibited a 66% AChE inhibition. Subsequently, a search of natural product AChE inhibitors from Turkish Snowdrop lily bulbs (*Galanthus elwesii*) was conducted. Chemistry fractionation techniques allowed the activity to be attributed to extracts with selected polarity characteristics. Dichloromethane and aqueous extracts showed the highest inhibitions.

## Communication Arts and Sciences

Communication Arts and Sciences - Oral Presentation (12:30 – 12:50 p.m., 107 Parmer Hall)

**Anthony Orbe**

*Communication Effectiveness in the Workplace Environment*

CarrieLynn Reinhard

Not too long ago, people that have belonged within the LGBTQ community have been severely oppressed because of their sexual orientation and have been disregarded from their work abilities. This has been an ongoing issue because most companies in the past, have viewed people that identify their sexual orientation as gay, lesbian, bisexual, transsexual, and/or queer as something that is unacceptable and it has been something that has not been permitted within an organization. Now that times have changed, companies have started to talk about being progressive, which means being open to all forms of diversity and a high level of openness to many people. In order to be able to understand how people feel about their organization and talk about their sexual orientation identification, my research conducted was based on responses that people felt most open to answering. IRB# 2018-30

## Economics

Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)

**Jairo Duarte**

*Colombia: A Closer Look*

Daniel Condon

An analysis on Colombia's economy and trading habits. As one of the oldest and most geographically diverse countries in South America, Colombia has had many options when changing and defining its economy. This project will explore the types of goods produced in Colombia, the main industries present, and examine the trading patterns of the country. Additionally, government policies and agreements will also be analyzed to determine what kind of trade Colombia largely participates in. Recent history of Colombia will also play a role in the examination of the country's economy and help determine why the country has developed in the way it did.

**Economics - Oral Presentation (10:50 – 11:05 a.m., 107 Parmer Hall)**

**Connor Dartt**

*Is Electricity the Key to Economic Growth?*

Kathleen Odell

This project will study the relationship between access to electricity and economic growth. First, I will determine how electricity has an impact on people's obtaining communication and technology skills. Second, I will study the extent to which technological literacy contributes to economic growth.

**Economics - Oral Presentation (10:30 – 10:45 a.m., 107 Parmer Hall)**

**Yesenia Soto**

*The Impact of Income Inequality on Deaths Caused by Hazardous Chemicals and Pollution*

Kathleen Odell

UN Sustainable Development Goal 3.9 states by 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution contamination. This project will explore the relationship between Goal 3.9 and income inequality. Focusing on 189 countries, I will identify the extent to which income inequality contributes to deaths caused by hazardous chemicals and air, water, and soil pollution. This is an important question because if income inequality is a factor that positively impacts deaths caused by hazardous chemicals and pollution, then there should be regulations to help close the gap, and thus reduce the mortality rate.

**Economics - Oral Presentation (11:10 – 11:25 a.m., 107 Parmer Hall)**

**Angelika Stec**

*Analyzing the Main Contributing Factors of Malaria Prevalence in Sub-Saharan Africa*

Kathleen Odell

UN Sustainable Development Goal 3 is "Ensure healthy lives and promote well-being for all ages." This research project will explore the relationship between Goal 3 and the malaria mortality rate. Focusing on 46 of Africa's 54 countries in the Sub-Saharan region, I will identify the extent to which developmental assistance reduces the malaria mortality rate. This is an important question, because according to the World Health Organization, nearly half of the world's population is at risk of malaria and more than one million people die because of it. Every year, countries in Sub-Saharan Africa have been shown to carry a high share of the global malaria mortality rate. As a preventable disease, malaria can be avoided using affordable and proactive methods.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Mikolaj Konczewski**

*The social and economic impact of legalizing marijuana*

Kathleen Odell

This research project will explore the effects of legalization of marijuana on income and incarceration rates, by state. Focusing on the 50 US states, I will identify the extent to which recreational and medical marijuana laws contribute to unemployment, education and poverty. This is an important question

because perhaps the legalization of marijuana will lead to economic growth and reduce levels of unnecessary incarceration in the US.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Daisy Pineda**

*Association between Unemployment and Suicide in the United States*

Kathleen Odell

Suicides account for more than 40,000 deaths per year in the United States. There are many factors that influence suicide rates within a country. Economic factors, especially unemployment, have been identified as a big influence. My study will look at the relationship between suicide rates and unemployment across US states, controlling for GDP per capita and average education level all at the state level. This is an important question because it suggests that sustained economic growth and economic decisions made by the government can have a big impact on the population.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Dawid Giza**

*Cause to the Lack of Access to Electricity*

Kathleen Odell

UN Sustainable Development Goal 7.1.1 is to ensure access to affordable, reliable, sustainable and modern energy for all. This research project will explore the relationship between the difference in access to electricity in urban and rural areas and the per capita income, government policies, and electricity production from coal, oil, hydro, renewable, and nuclear sources. I will focus on 188 different countries to see how these variables affect the percent difference from urban to rural areas access to electricity. This is important because as countries around the world develop it is important for the people to have access to electricity. Understanding why people do not have access to electricity can help to provide access to electricity to those people.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Era Doce**

*The Gender Wage Gap and its Importance in Society*

Kathleen Odell

This research project will explore the gender wage gap and the influence that education, race, and state of residence have on the wage gap. I will be focusing on the 50 US states, exploring the way that gender, race, and education affect wages, and the gap between men's and women's wages. This is an important question because it will show the way that a variety of factors contribute to the wage gap. Often, discussions of the wage gap are focused only on the big picture (the wage gap alone) without looking at the many factors that contribute to that difference.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Manuel Corral**

*Do More Innovative Countries Use Less Fossil Fuels?*

Kathleen Odell

This project studies the relationship between how developed and innovative a nation is, and how dependent they are on fossil fuels. Focusing on approximately 125 countries, both developed and developing, this relationship may be identified. This is an important question because we as a species must find a way to limit or even eliminate our dependence on fossil fuels if we want this world to be habitable for generations to come.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Denis Soldo**

What Should Countries Focus on When Trying to Have More Clean and Sustainable Water?

Kathleen Odell

UN Sustainable Development Goal 6 is "clean water and sanitation." The topic that I chose to study and analyze is what countries need to focus on to help them have more clean and sustainable water. I chose this because I feel strongly that everyone in the world should at least have clean water to drink because that is a necessity. I hypothesize that the main factors that will show the most effect will be the location of the country or region and the environmental regulation that is within that country or region. I will also be adding other independent variables such as GDP per capita and still looking at what else might affect it. The dependent variable that I will be using is clean water. I am hoping that from some of the independent variables that I choose that I will be able to find a strong correlation between them and the dependent variable to see what countries can do to help solve this problem.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Jose Vazquez**

*Transportation, Making Life Easier*

Kathleen Odell

UN sustainable development goal 11 is making cities more inclusive, safe and sustainable. My project will explore how transportation and access to it can improve quality of life. This research project will explore the relationship between a more sustainable better quality of life and how transportation affects it. This research will focus primarily in cities where transportation is concentrated, and where over half of the human population lives. The UN has projected that by 2030 over 5 billion will live in these cities. I will identify to what extent how transportation and its access to it affects how quality of life can be either improved through better mobility in a city. This is important to understand whether transportation can improve peoples' quality of life.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Majed Albudayri**

*Reducing Youth Unemployment by 2020*

Kathleen Odell

UN Sustainable Development Goal number eight is "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all." This research project will explore the relationship between Goal 8 and the factors which are affecting our next youth productivity.

This is important, because if we achieve this goal, it will provide a better life for youth and contribute to sustainable economic growth.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Klaudia Augustynska**

*Factors Contributing to Violent Crime in US Cities*

Kathleen Odell

The United Nations has an agenda of Sustainable Development Goals to meet the needs of the present without compromising the needs of the future. Goal 11 on the list is focused on cities and more specifically, “Make cities inclusive, safe, resilient and sustainable.” This research will focus on the “safe” aspect of the goals in the United States. Despite crime declining over decades, it is still a persistent problem in today’s society. Crime data tends to be separated into two different sections; property crime and violent crime. Violent crime is defined as any action including but not limited to harassment, rape, assault, robbery, and murder. This project will consider the different factors that pertain to violent crime in different U.S cities.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Araceli Perez**

*Sustainability in US Households*

Kathleen Odell

This research project will explore the waste footprint of households. Focusing on the United States I will identify key factors related to household waste footprints . This is an important question because we are producing waste at a faster rate than it can decompose. My project will suggest possibilities for the US to make regulations to promote sustainability.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Guadalupe Belmonte**

*What Factors Contribute to the Rate of Homelessness and What Can We Do to Help?*

Kathleen Odell

I would like to find practical approaches to decreasing the population of homeless people across the United States. This research project will explore the relationship between the rate of homeless and the average cost of living, minimum wage, average age, poverty rate, and the percentage that are non-white. Concentrating on the 50 largest cities in the United States, I will identify the extent to which these factors and the relationships they have with the rate of homelessness can contribute to decreasing the number of homeless people in each city and beyond. I believe this is an important issue to address, especially after the polar vortex in the Midwest, because of how dangerous being homeless is and how prominent the homeless population is in large cities.

**Economics - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Kyle Miller-Davila**

*Number of Children Per Women Due to Economic Factors*

Kathleen Odell

This project will study the different economic factors that affect how many children women have, which is the dependent variable. These factors include percentage of women who have knowledge about birth control, education, income (GDP per Capita), age, knowledge of sex education, and other economic factors. My research will include data from women in different countries to see if there are any differences between countries. The study will specifically see if education has a significant correlation for the dependent variable, which is number of children per woman. The hypothesis is that as the number of years of education is higher, then women will have a lower amount of children.

## Engineering

**Engineering - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)**

**Laura Prout**

*3D Reconstruction of 2D Images for Visualization of Sensor Data in Mobile Robots*

Marion Weederemann

This research uses photogrammetry to create 3-dimensional models of real-world environments to visualize mobile robot sensor data. The models will be used to help evaluate mobile robot navigation integrity. Integrity is a measure of trust in a sensor's information in the presence of undetected faults and is used to quantify mobile robot safety. Photos were used to create 3D point clouds and mesh models of the robot's environment, and these models will be used to evaluate integrity after making modifications to the environment digitally. This research will help improve the approach to guaranteeing safety of Autonomous Passenger Vehicles (APVs) before they are integrated into our everyday lives. Current results have shown that photographs taken from well-known and widely-used self-driving car databases, such as the KITTI dataset are insufficient for photogrammetry due to the low resolution of the photographs and sparse point cloud representations of the paths and objects.

## English

**English – Panel Presentation (8:30 – 9:20 a.m., 108 Parmer Hall)**

**Gloria Gervacio, Caitlin Moran, Claire Trimble, Shaina Warfield**

*Fellowship: Writing for the Self and the Community*

Jennifer Stockdale

In presenting their case studies, the Writing Fellows will discuss the relationship between their own writing processes and the academic, intellectual, creative lives of the peers with whom they work. This deep understanding of one's individual process allows for the creation of spaces where others can rethink their own approach to writing. Sensitive yet critical, that work attends to the vulnerability that accompanies sharing a piece of writing. The Fellows' personal journeys as writers help them empathetically engage with other writers, using these brief yet profound moments of connection as methods for mutual understanding between growing intellectual and artistic minds.

**English - Oral Presentation (2:30 – 2:50 p.m., 115 Parmer Hall)**

**Angel Camuy**

*Cartoons, American Nationalism, and Dr. Seuss?*

Ortega, Gema

The project I will present will include a slide show presentation with an oral report on my findings. The project is about Political Cartoons during the World War 2 era, and how they were used to promote American Nationalism. The project will include Cartoons from reputable artists during this time that worked for American Newspapers. The oral portion will focus on the analysis of specific cartoons.

**English - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)****Sabrina Chavez**

*William Hogarth's Marriage a-la Mode as Tragic Drama*

Daniel Anderson

William Hogarth's *Marriage a-la Mode* is a satiric series of paintings, later turned into prints, that comment on arranged marriages of the upper class in the eighteenth century. While the paintings are satiric commentaries, they contain characters and a narrative that is reminiscent of tragic drama. The plot and events that take place in the contractual marriage of the Earl of Squander's son and the Alderman's daughter contain the elements of tragedy and drama. Hogarth utilizes layers of meaning through symbolism and "paintings within the painting" that further support the narrative. Through a close reading of the paintings themselves and analysis of the embedded images, along with secondary research, the story of the arranged marriage is more complex than it appears to be. Since Hogarth's *Marriage a-la Mode* contains elements of tragic drama, Hogarth should be considered an English dramatist of the 18th century, not just a painter and printmaker.

**English - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)****Katherine Chavarria**

*Landscape and the Poet*

Jodi Cressman

This project presents new poems that respond to specific landscape photographs taken in the United Kingdom. My poems work to complement these images, which depict both natural and urban scenes, by bringing voice and motion to an otherwise static image. The focus on the project is two-fold: first, the poems call into question the relationship between writing and photography and suggest ways that these two art forms can work together to create one larger idea. Second, the project explores the relationship between human nature and the natural world by exploring the concepts of emotion, experience, and thought in viewing landscapes. I drew artistic inspiration from a variety of photographers, storytellers, poets, and manuscripts such as *Mezzanines* by Matthew Olzmann, and *Dante's Inferno* by Dante Alighieri.

**English - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)****Maria Rueda**

*Models and Representations of the Virgin Mary: How do we understand "Marianismo" and "Machismo"?*

Joseph Heininger

My independent research project would focus on the different models and representations of the Virgin Mary and how she challenges cultural and gender identity. By using the Hispanic cultural beliefs of "marianismo" and "machismo", I will emphasize the Virgin's influence on literature and how individuals understand these two concepts. By focusing on the different images and apparitions of the Virgin Mary in different countries, we will explore the significance of the apparitions in each place and connect it to how people identify themselves as with the Virgin. Most importantly how the Virgin's different models and representations, influences or challenges cultural values of gender behavior and cultural identity.

## ExcEL Scholars

### ExcEL I - Oral Presentation (8:30 – 8:50 a.m., 109 Parmer Hall)

**Diana Figueroa & Destiny Lopez**

*ExcELing in London*

Alison Healy

Dominican's ExcEL Scholar Awards brought two students, with very different academic pursuits, together to study in London. Through touring the UK and deepening their respective studies of graphic design and early childhood development, these two students feel career ready and prepared to take on the world.

### ExcEL II - Oral Presentation (9:30 – 9:50 a.m., 109 Parmer Hall)

**Miriam Hernandez-Teran**

*iConference 2019 Washington, DC*

Donald Hamerly

The iConference 2019 is launching a new Undergraduate Symposium event that will give undergraduate students the chance to network with other participants, discuss relevant issues, and interact with faculty. During the iConference, there will be forums discussed by information scholars, researchers and professionals to share their insights on critical information issues in contemporary society. Developing new ideas in information science is a primary characteristic of the event. I will share my experiences at the event and discuss the impact I gained from the conference that will contribute to my plans after college.

### ExcEL III - Oral Presentation (10:00 – 10:20 a.m., 109 Parmer Hall)

**David Perez**

*Student Affairs Pre-Professional Experience*

Mark Carbonara

In this session, I will be presenting on my journey at the 2018 National Association of Student Personnel Administrators (NASPA) conference and the Undergraduate Fellows conference held in Philadelphia. During this time, I was able to meet other undergraduates across the nation who also want to pursue a career in the field of higher education administration. In addition, I learned valuable information that expanded my knowledge of this field of work. It was through these experiences I had that inspired, empowered, and affirmed my decision to pursue this fulfilling career.

**ExcEL IV - Oral Presentation (10:30 – 10:50 a.m., 109 Parmer Hall)**

**Antoine Carter**

*Carter Clothes*

Jose Blanco

I will discuss my business, 'Carter Clothes,' It's a clothing business I started up a little over a year ago, and was able to fund over this summer with the EXCEL Scholarship and use in place of my internship. I will be showcasing recently created designs as well as school projects incorporating the brand. This presentation is intended both to show students and other designers that they too can be entrepreneurs and to motivate them not to hesitate on launching a business if that is something that they truly aspire to do. I want students to see you do not have to take the traditional route of going to college, getting a degree, and only then attempting to find a job. With the right vision and dedication, you can become your own boss.

**ExcEL V - Oral Presentation (11:00 – 11:20 a.m., 109 Parmer Hall)**

**Katia Lima-Lopez**

*Software Development Internship at Paylocity*

Cyrus Grant

This session will focus on my software development experience at Paylocity, an internship I was able to pursue with help from ExcEL Scholar Award funding. I will also highlight something that may be helpful for other students to think about as they pursue their internships - the steps that I took in order to receive a job offer there.

**ExcEL VI – Oral Presentation (12:30 – 12:50 p.m., 109 Parmer Hall)**

**Ruben Castillo, Jacqueline Viola**

*"Transformative" is more than just a word*

Paul Simpson

Traveling is well known for its ability to broaden one's horizons and instill a sense of independence; creating experiences that are uniquely their own. Study abroad experiences are often described as "transformative." What does this word actually mean? To us, it means reflecting on the values of powerful, prominent cities such as Paris and Florence and reflecting on our nation's values to realize changes that need to be made at home. It means having the ability to immerse ourselves in the beauty of revolution, reform, and rebuilding by being eyewitnesses to historical sights typically only seen in a textbook image. It means valuing every experience so we could ultimately leave the foreign city we had the privilege to call home forever remembering the sound of its daily hustle and bustle. In this panel, we want to take you with us and find a way to show you through our eyes what made these experiences so invaluable that the only word we could find to describe it is "transformative." Taking what we've learned and translating it into our professional Nursing practice is the final piece of this puzzle. As a result of our participation in study abroad programs we have developed a greater understanding of the humanity we all share - regardless of nationality, religious tradition, sexual orientation, political affiliation, and gender identification. After all, when it comes to being a nurse, seeing the world through the eyes of your patients is something that cannot be undervalued.

**ExcEL VII - Oral Presentation (1:00 – 1:20 p.m., 109 Parmer Hall)**

**Kiasee Ray, Bianca Satterfield**

*Beloved Community*

Tara Segal

This presentation will address the experiences of two interns at the sites where they served in the summer of 2018. The Beloved Community is a leadership development program that interviewed many students in search of talented leaders who could lend their expertise in achieving visions of peace in the black community while learning from not for profit organizations about nonviolent methods of action through service and leadership. Bianca Satterfield and Kiasee Ray, two interns in Beloved Community's first cohort, will talk about how their capabilities were exercised and what they learned through their internship sites.

**ExcEL VIII - Oral Presentation (1:30 – 2:20 p.m., 109 Parmer Hall)**

**Joseline Cano, Kathryn Destri, Estefania Espinosa, Jose Villareal Favela, Noemi Hernandez, Alexandra Rivera**

*Excel with ExcEL: Study Abroad Experiences in Africa, Ecuador, Spain, Italy, Ireland and China*

Paul Simpson

How does studying abroad affect the lives of students? In this presentation we will bring together Dominican students who were awarded the ExcEL Scholarship and used it for a study abroad program such as, Africa, Ecuador, Spain, Italy, Ireland and China. As speakers, we will focus on how the experience has contributed and changed our academic and professional objectives. In this presentation, we will demonstrate the ways in which we have enhanced our global skills, given that we all had the opportunity to observe diverse lifestyles and live within them. Some of us had first-hand experience in a medical clinic and developed a more convenient environment for local schools. Others learned about the history and artistic movements that defined the countries and led them to form different forms of government than what we are used to in the United States. As different as these experiences are, what ties us together is the impact our time abroad had on us, as well as the resulting drive to live and maintain a more just and humane world.

**ExcEL - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)**

**Nicole Fuentes, Catherine Kessuvan, Annalise Metcalf, Alyssa Roen**

*Italian Art & Culture as Experienced Through Dominican's Study Abroad Programs*

Jeffery Cote de Luna

In a combined presentation by ExcEL Scholars who participated in Dominican's study abroad programs of Florence 2018 and Rome 2019, we will present our experiences utilizing art done on scene in Florence alongside prominent literary contributions that aided in not only developing Florentine culture, but also the Italian language itself. This will be presented and intertwined with the culture and art seen and experienced in Rome. These two cities together and our experiences recorded and remembered there will be used to demonstrate the chronological art developments that took place then and still influence the culture today.

## Fashion

### Fashion - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)

**Rebbeca Kelm, Shaylin Thurston**

*Online Retailer: Survivor's Sanctuary*

Melissa Carr

An online retail store was created to help survivors and fighters of breast cancer to feel sexy and confident again. The goal of this project was to become change agents through the application of socially responsible business practices. Survivor's Sanctuary focus was using fabrics that are 100% cotton sourced from fair trade producers. The plan helped develop an understanding of the challenges of running a "truly" socially responsible business.

### Fashion - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)

**Antoine Carter**

*Carter Cares*

Melissa Carr

Carter Cares' goal is to become change agents through the application of socially responsible business practices to fashion retail development. The retailer was developed to gain a practical understanding of the challenges of running a "truly" socially responsible business.

### Fashion I - Oral Presentation (9:30 – 9:50 a.m., 115 Parmer Hall)

**Naomi Rush**

*Jewels: A Scrub Line for African American Women*

Tracy Jennings

A lot of scrub lines for the medical field exist today. Usually scrubs are made of solid colors or basic prints which are intended for a wide and general audience. Few scrubs are designed to meet the needs of specific niche markets. That is why the Jewels scrub line was created. I have created pieces that are functional and fashionable but also showcase African American women and their traditions and culture. The Jewels collection is made for African American women so they can express their confidence and power through their clothing while at work in the medical field.

### Fashion II - Oral Presentation (10:00 – 10:20 a.m., 115 Parmer Hall)

**Laurn Sudduth**

*Specialty Markets Research Presentation*

Tracy Jennings

I researched and designed a line for the medical scrubs market. Research included investigating the demographics and psychographics of the niche market. I analyzed the competition and conducted a survey of users' needs and wants. After completing an environmental scan, the results were used to create a collection of functional and fashionable scrubs for women in the medical field.

**Fashion - Exhibit (1:30 – 2:30 p.m., Parmer Atrium)**

**Claire Groppe**

*Essentia (Latin for Essence)*

McKinley Johnson

For the past year, I have designed and created a miniature three-piece collection. Although the inspiration for the garments came from a variety of natural forms, such as cherry blossoms and branch like structures, I tried to capture the essence of nature through lace and different hues of golden appliques. On display is one garment from the collection.

**Fashion – Exhibit (1:30- 2:30 p.m., Parmer Atrium)**

**Heather Hans**

*Abstract Harmony*

McKinley Johnson

Since August of last year I have been working on my Junior collection. A Junior collection is a set of three garments designed and made by a student to represent and capture their inspiration as a Fashion Designer. My inspiration for this collection is abstract shapes and lines that work together to create beautiful motion for the eye. While also experimenting in void spaces and structures using abstract shapes, I think of my designs as walking art installations of architecture and shape work, all happening simultaneously to create an interesting yet harmonious vibe.

**Fashion - Exhibit (1:30 – 2:30 p.m., Parmer Atrium)**

**Lexy Spreitzer**

*Natural Beauty in Fashion*

McKinley Johnson

Lexy Spreitzer presents on her senior fashion design collection. These designs are inspired by the self-love of natural beauty, both internal and external. Lexy wants to create positive change in the fashion industry that encompasses body-type inclusivity. She showcases this in her collection by using both straight sizes and curve sizes in her work.

**Fashion - Exhibit (1:30 – 2:30 p.m., Parmer Atrium)**

**Dejah Mansfield**

*What it means to be masculine*

McKinley Johnson

I will be showcasing part of my junior collection from this years fashion show. The story behind my collection was how some men are so afraid to dress outside of the normality for a man because they are afraid of being judged. So, for my collection I am testing the boundaries for men's masculinity by designing clothes that you wouldn't see the typical man wearing. For the presentation I will be showing one of my three piece collection.

**Fashion – Exhibit (1:30- 2:30 p.m., Parmer Atrium)**

**Rebecca Miranda**

*A collision vision*

McKinley Johnson

My mini collection is inspired by fast limited edition cars and today's modern houses structure. I picked fast limited edition cars because they are so rare, edgy and limited, just like my collection. It is shown in my collection by the colors, and fabric textures I choose. As for the modern house structure, I liked the different unbalanced roof and that's what I incorporated in one of my garments.

**Fashion – Exhibit (1:30- 2:30 p.m., Parmer Atrium)**

**Amanda Ruano**

*Sotobosque*

McKinley Johnson

My mini-collection was inspired by the tropical rainforests of Latin America. The little details of the shadows between the trees, the shapes in its flowers, and the layering of the plants... I wanted these details to transmit and be the highlights of my collection. Through color, texture, and construction, I wanted the viewer's eye to immediately receive the tropical vibe and feel that experience. The experience is called "Sotobosque". It is the Spanish word for 'understory', which is the layer of the tropical rainforests that receives little sunlight but contains the roots of the trees, flowers, and plants. This is the scene that you will experience when you see "Sotobosque".

**Fashion – Exhibit (1:30- 2:30 p.m., Parmer Atrium)**

**Shaylin Thurston**

*Wahine Ikaika*

McKinley Johnson

Shaylin Thurston has always believed in the empowerment and equality of women. She has designed a collection made for a wide variety of diverse women to make them feel like their absolute best selves. She will be presenting her senior design collection that is based on feminism.

## Global Learning Experiences

**Global Learning Experience - Oral Presentation (10:30 a.m. – 11:20 p.m., 113 Parmer Hall)**

**Students in ELS Program**

*Education Perspectives from International ESL Students*

Deb Lowe

The aim of this session is to inform American students about how different cultures approach and value education along with explaining that the process of learning and preparing for the future is done differently all around the world. Having an understanding of how someone else is educated can lead to a better cultural understanding as well as an understanding as to how to work with and learn alongside

international students and future international colleagues. The international students participating in this presentation will discuss the education in their respective countries by sharing their perspectives and critiques of their own education and reflect on their education in the U.S. so far. Finally, the students will give suggestions on how to approach and include international students in and out of class. The session will end with a Q&A from the audience.

**Global Learning Experience - Oral Presentation (11:30 a.m. – 12:20 p.m., 107 Parmer Hall)**

**Magaly Escobedo, Vanessa Flores, Donald Johnson, Jocelyn Perez, Alexis Ramires, Meagan Rosario, Elena Sandoval, Abigail Sauer, Leslie Sibri, Rebecca Simon, Shannon Wilcox**

*Guatelinda- The Beauty of Guatemala*

Tara Segal

Over the recent Winter break a group of students visited the beautiful country of Guatemala. Through service and cultural immersion the students discovered what it means to live in Guatemala and be a part of the culture. From building movable homes and safer stoves to picking coffee and dining in the homes of farmers, the students found beauty where they did not expect.

**Global Learning Experience - Oral Presentation (2:30 – 2:50 p.m., 115 Parmer Hall)**

**Meyahuelztin Angeles**

*Panama 2019 World Youth Day*

Sharing love, compassion, and the same faith surpass racial, gender, ethnic, language and, cultural barriers. World Youth Day acts as a common ground that brings youth from every continent to share the love of Jesus Christ. World Youth Day 2019 was held in Panama City. It brought together approximately 500,000 youth from different countries and backgrounds. This week-long pilgrimage was composed of different cultural and spiritual events located around the city of Panama, allowing the youth to explore the city as well as its history. Some of these events included daily catechesis, a vocational fair, cultural dances, musical concerts, daily mass, and vigil directed by priests from all over the world and Pope Francis. Experiencing the meaning of being Catholic, universally, is much more than sharing a common faith. It is sharing the love of Christ.

## Information Science

**Information Science - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)**

**Jesus Salgado**

Human - Machine Combination: Through the Context of *Uber*

Donald Hamerly

This study will explain the human - algorithm relationship. This will mainly be done through the Uber application, in way of Uber drivers and the Uber GPS function. GPS machine routing wrestles with human routing. This has been showcased when I'm a passenger. It has also been brought up by Uber drivers themselves. This research paper will report on the superior human - machine combination, rather than the notion of computers taking over. This report will display through several ways how Uber drivers interact with the Uber GPS function.

### Information Science - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)

**Alex Lorenz**

*Facebook and Data Privacy Controversy*

Donald Hamerly

Facebook offers its services as a social networking platform for free because their business model is based on targeted advertising. The users themselves are the product who are "bought and sold" in the sense that their personal data is mined and brokered by Facebook and third parties in order to target the users with ads that are specific to their interests and behavior patterns. This study examines Facebook's data policies, the high profile controversies related to them, and the ways in which Facebook has responded through their statements and actions. In the era of data breaches and fake news, users might be wondering if Facebook is capable of learning from their mistakes or if their data privacy is still less important than ad revenue.

### Information Science - Poster Presentation (12:30 – 1:30 p.m., Parmer Atrium)

**Abigail Berardi, Miriam Hernandez-Teran, Philip Linninger**

*Does Company Size Impact Twitter Marketing Techniques?*

Donald Hamerly

Marketing is crucial to business success, and the way businesses choose to market can impact their potential clients. This study uses social media data analysis methods to examine how social media marketing differs between large and small companies. Data mining of social media posts from six companies for three months (November 2018 through January 2019) yielded data for content analysis that reveals insights into how a company's size may impact its use of social media for marketing.

## Internship

### Internship - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)

**Giacomo Polinelli**

*Internship at the Italian Trade Agency*

Veena Carlson

For my poster presentation, I am planning to discuss and describe my internship experience at the Italian Trade Agency, ITA. In particular, I will give an overview of what the ITA is and of what it does here in the United States. I will also describe the different jobs I have done during my internship and what I have learned from them. I will present some of the work I have done, in particular, the States Fact Sheets on which I have spent a good amount of time. I will also add to my presentation any other experience I will have from now to the completion of my internship.

## Management 197

### Management – Poster Session (9:00 – 10:30 a.m., Parmer Atrium)

These poster presentations are a competition between teams of students participating in the Management 197 Gateway Business Practicum. The students come from four different classes and their task was to propose ideas for new businesses that are both for-profit and sustainable. Those with the top ideas became team captains, who were joined by other classmates to research and assess the feasibility of these business ideas. Each business must work toward at least one Sustainable Development Goal as laid out by the United Nations PRME organization. Teams will be judged by members of the business community who will evaluate them and then invest (fake) money in their top teams. The teams earning the most money invested will be declared the winners.

Student teams, titles, and faculty mentor:

**Fatima Parraguire Alvarado\***, Daniel Fuentes, Susan Adame, Evelin Y Silva

*Agave Tequila*

Yuanqing Li

**George D Kougan\***, Aylin Barragan, Jimmy D Cowan, Ana L Patino Perez

*Brush 360*

Yuanqing Li

**Jared M Schmook\***, Zitlalli A Bracamontes, Giselle Fernandez, Manny A Leon

*Jaymes Menswear*

Yuanqing Li

**Tomasz Kuczewski\***, Tiffany L Abbatacola, Edgar Perez, Benjamin T Santagata

*The Solar Face*

Yuanqing Li

**Greta Rupeika\***, Esperanza L Gomez, Gabija Sinickaite, David Soto

*Zip & Go*

Yuanqing Li

**Nicole O Sedlacek\***, Tuong Vi Nguyen, Nicole Soltyszewski

*Borrow My Books*

Yuanqing Li

**Javier Urbina\***, Sebastian Glodz, Selena Gonzalez, Valeria Rodriguez

*Corazon de Mama*

Yuanqing Li

**Liam Carroll\***, Bregin D DeMarco, Edy S Ramirez, Jameline Rojas

*Keep It Fresh*

Yuanqing Li

**Cindy Fulgencio\***, Bryam X Penaranda, Brittany E Perri, Destiny N Reyes

*My Friend & I*

Yuanqing Li

**Randall B Pietrowski\***, Gilberto Arreola, Jonathan Hernandez, Jesus Lopez

*Screech*

Yuanqing Li

**Thomas G Ross\***, William J Ferraris, Hayden F Young

*Therma View*

Yuanqing Li

**Sophia Kramer\***, Itzayana Esquivel, Giacomo Parrino, Jacob Przepiora

*Un-Branded*

Derek Ruth

**Anthony Tyler\***, Aretha Omal, Jonathan Leon, Pedro Viveros

*Farmacy*

Derek Ruth  
**Pablo Nicanor-Orozco\***, Karyme Castro, Anthony Mederos  
*College Text Chat*  
Derek Ruth  
**Hunter Faurbo\***, Paul Sondhaus, Connor Chynoweth  
*Kick It*  
Derek Ruth  
**Adrian Cebula\***, Omar Patino, Joshua Ramirez  
*Get Up 'n Go*  
Derek Ruth  
**Evelyn Astudillo\***, Bryan Soto, Alejandro Ojeda  
*Sole Swap*  
Derek Ruth  
**Sarah Lychock\***, Sandra Fuentes, Leslye Arreola-Molina  
*Flight Swap*  
Derek Ruth  
**Yaslin Lopez\***, Estefani Sotelo, Melanie Orellana  
*Eat*  
Derek Ruth

## Mathematics

### Mathematics I - Oral Presentation (8:30 – 8:50 a.m., 107 Parmer Hall)

**Arely Castaneda, Edwin Hipolito, Marissa Juarez**

*A Hormone Therapy Model for Breast Cancer Using Linear Cancer Networks*

Mihaela Blanariu

Cancer is an invasive disease that is a result of a mutation or set of mutations, which prevents the carry out of cell death. Many treatments have been developed to encounter specific forms of cancer, yet there is still no cure for it. Michelle McDuffie uses a linear cancer network to create a mathematical model that illustrates how hormone therapy can be an option for curing or reducing tumor sizes of estrogen receptor breast cancer. The mathematical model shows the effectiveness of hormone therapy by predicting and then tracking the coexistence between the growth of healthy cells and cancerous cells in the human body. In the case of achieving coexistence, hormone therapy can be an option for treatment, or it can increase the efficiency of other treatments, such as surgery.

### Mathematics II - Oral Presentation ((9:00 – 9:20 a.m., 107 Parmer Hall)

**Angel Dominguez, Victor Roman, Christian Soto**

*Guards, Galleries, Fortresses, and the Octoplex*

Mokry, Jeanette

Being able to provide 100% security is essential to many business owners. Based on the results of T.S. Michael's article, "Guards, Galleries, Fortresses and the Octoplex,"<sup>2</sup> the maximum value for the minimum number of guards necessary to protect any structure can be calculated and depends on the shape of the space. Using techniques like triangulation with a proper 3-coloring scheme and quadrangulation with a proper 4-coloring scheme, guards can be placed in ideal locations. These techniques can be extended to

real world applications like the Mars rover, specifically the placing of cameras and sensors and military operations for base security.

#### Mathematics III - Oral Presentation (9:30 – 9:50 a.m., 107 Parmer Hall)

**Romeo Lopez-Rodriguez, Giardo Romero, Miguel Romero**

*Gerrymandering (Mathematical Approaches to Solving this Issue)*

Aaron Zerhusen

Gerrymandering is the partitioning of districts that favors a political party. The material we will be presenting examines different solutions to the problem by other Mathematicians varying from computational to geometric approaches. We will examine a graph-theory solution based on population alone. The goal of this approach will be to delineate more just and balanced districts. We will then observe the practical applications of the proposed solution compared to that of the current methods in play.

## Nutrition

#### Nutrition - Oral Presentation (1:30 – 1:55 p.m., 113 Parmer Hall)

URSCI Undergraduate Research Assistantship

**Lucille Benoit**

*Applications of Whey in Fruit Beverages*

Yamunadevi Puraikalan

Lucille Benoit and Professor Yamunadevi Puraikalan have worked together to find a creative, alternative application of whey, a common agricultural by-product. Whey-based fruit beverages are an innovative, functional, environmentally-conscious way to reintroduce whey back into the supply chain. Benoit and Puraikalan have sought to accomplish this goal by testing different concentrations of whey protein powders incorporated into orange juice. By turning a wasted-food product into a delicious, hydrating beverage, Benoit and Puraikalan have given new life to an ingredient in the food supply chain.

## Physics

#### Physics - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)

URSCI Undergraduate Research Assistantship

**Samuel Bjorklund**

*Muon Detector Readout Electronics and Efficiency*

Joseph Sagerer

In the Fall semester of 2018, I did a research project for URAP where I worked on testing subsystems for a muon detector. This involved soldering and assembling printed circuit boards and running an efficiency study. To start, I ran different tests to determine if the readout boards fit performance standards. Next, I setup and ran an efficiency study using a scintillator and light-tight box with the readout electronics. Finally, through the different positions on the 1m-long scintillator that the readout electronics were placed, we determined the efficiency of the detector vs position of the muon. This gave us insight into the expected overall performance of the project.

Physics - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)

**Leslie Castillo**

*Investigation of K27 Synthesis - Synthesis Steps III and IV*

Joseph Sagerer

K27 is a fluorescent dye that is used in scintillator detectors. It is a commercially available compound that is expensive to obtain; therefore, we wish to synthesize the compound. The overall synthesis of K27 is a four step process. In the summer of 2018, I interned at Fermilab in the scintillation detector development lab. My contribution to the research for the synthesis of K27 was on reaction III and IV. The Step III reaction involved synthesis of APNA to BXA which yielded a pure product based on analysis. The Step IV reaction consisted of synthesizing the BXA into BXI. The process was completed through step IV. Using gas chromatography and NMR spectroscopy the final product and yield were determined.

Physics - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)

**Victor Roman**

*A Small Scale Detector for Tracking Muon Particles*

Joseph Sagerer

We're developing a Data Acquisition (DAQ) System for use in particle physics detection. The detection system is being designed on a Printed Circuit Board (PCB) to maximize space and minimize Electromagnetic Interference (EMI). The board uses a combination of Operational Amplifiers with Analog to Digital Converters (ADC) to produce a signal output. Two methods for collecting muon signals are incorporated on this project. Multiple operational amplifier feedback designs and PCB designs were produced to maximize signal output.

Physics - Poster Presentation (11:30 a.m. – 12:30 p.m., Parmer Atrium)

**Olivia Maj**

*K27 Synthesis Reaction*

Joseph Sagerer

K27 is a particular dye that composes of fluorescent organic compounds that can be used as dopants in plastic scintillation detectors. In this research, the K27 is formed through the synthesis of a benzoxanthene compound, using R-4-t-butyl as the main substituent.

## Political Science

Political Science - Oral Presentation (1:00 – 1:20 p.m., 107 Parmer Hall)

**Trevionoa Matthews, James Stokes**

*Mary Jane vs. The People*

Homan, Patrick

New Governor Pritzker pledged to legalize recreational marijuana and the Illinois General Assembly has a bill proposing recreational marijuana. Legalizing marijuana can mean a lot for the state, but what does it mean for those who have already suffered? Mary Jane vs. The People will explore how legalizing marijuana will affect the African American community in Chicago. Using historical data, myself along with my colleague James Stokes explored the foundation of The War on Drugs and its connection to demonizing marijuana. Not to mention, how valued marijuana was in America before minorities began enjoyment. The historical foundation of legalizing marijuana has led to the overpopulation of jails for minor marijuana offenses. How will legalizing marijuana affect African Americans? Is it the drug or the person using the drug?

#### Political Science - Poster Presentation (1:30 – 2:30, Parmer Atrium)

URSCI Undergraduate Research Assistantship

**Kassey Franco**

*Factionalism*

Patrick Homan

Factions in political parties are playing a significant role in shaping U.S. foreign policy in the polarized atmosphere of Washington, DC. Divisions in major U.S. political parties have a long history, and through many recent procedures of policy making, not only has the left and right been even more polarized, but also there seems to be an existing trend of factionalism within a political party. Through reading case by case and learning how to research alongside a professor, I've been able to learn how to find, cite, and organize articles that can help strengthen an argument when writing while learning about the existing issue of factionalism within our country.

#### Political Science - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)

**Asma Alneel, Ibrahim Alneel**

*Political Leadership*

Patrick Homan

For my research project, I am going to research on the topic of Political Leadership. My objectives for my research paper? Introduction: The History of leadership. Establish what the various qualities that good leaders have which make them successful and endear them to the people. Apply the various qualities to the leaders in our world today, determine what distinguishes a successful leader from the other ordinary political leaders of the world. Determine the advantages, the disadvantages and the other related information concerning the various forms of leadership. Finally: How to make a good leader?

## Psychology

#### Psychology - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)

**Khadijah Alfred, Kennedy Booner, Jasmyn Hardin, Llaned Villegas**

*Classifying Obesity*

Tracy Caldwell

Obesity can be considered a label that has been created by the medical field in order to provide people with expensive medications and rigorous treatments, that may not be covered by their insurance carrier. This study uses a two by two factorial design in order to see the differences when a participant is placed in a disease and control condition. The participant's body mass index will be taken into consideration during this study. In support of prior research (Hoyt et al., 2014), examined the impact of the public-health message of labeling obesity as a disease. As hypothesized, is that after reading the articles, the participants will change their ways of eating by choosing the appropriate meals and using it in combination with exercise.

**Psychology - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)**

**Esmeralda Mariscal, Elena Sandoval, Cecilia Uriostegui**

*Cities Mentor Research Project*

Sophia Duffy

The Cities Mentor Project is a culturally grounded intervention program for Black, low-income, urban youth experiencing community trauma. Youth receive trauma informed trainings to develop coping techniques alongside college-age mentors. Youth are also connected with prosocial after school activities such as clubs, sports, and more. There is some research to indicate that mentors experience socio-emotional and academic benefits from being mentors, in addition to the potential benefits mentees may experience. This poster will present a qualitative account of our experiences as mentors, as well as the potential benefits obtained from the experience. We will explore topics such as relationship building, identity development, clinical skills, trauma knowledge and having a trauma-informed lens, and facing mental health issues in low-income communities. We will also discuss on how this experience has contributed to vocational discernment and serving the mission of Dominican University.

**Psychology - Poster Presentation (1:30 – 2:30 p.m., Parmer Atrium)**

**Iris BorregoSolis, Kathryn Brien, Colleen Lamb, Yasmin Luecht, Jacqueline Moya, Emily Sanabria, Gaby Salgado**

*Treatment of Complex Trauma Exposure: A Meta-Analysis*

Sophia Duffy

Complex trauma is exposure to multiple and repeated interpersonal traumas that predicts complex psychological symptoms and mental health disorders (Briere & Scott, 2015). Complex trauma exposure has pervasive effects on development and psychological functioning, resulting in complex posttraumatic stress disorder, developmental trauma disorder and/or enduring personality changes. All these problems involve combinations of relational problems, affect regulation problems, identity disturbance and maladaptive behaviors (Briere & Scott, 2015). Consequently, many are interested in the most effective ways to decrease the predictive power of complex trauma exposure. This meta-analysis quantifies the effectiveness of interventions for individuals with complex trauma exposure and identifies what factors influence effectiveness. Fifty studies were included after applying inclusion criteria (complex trauma exposure, psychological intervention, comparison group, and evaluation of psychological outcomes). Our findings detail intervention effectiveness, effectiveness for specific populations (age groups, ethnic minority, SES, etc.), and intervention characteristics that influence effectiveness (length, structure, targeted skills, etc).

**Psychology - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)**

**Anastasiya Danylkiv**

*An Extended Replication of the Morning Morality Effect*

Anthony Krafnick

Does the time of day influence people's moral behavior? Past empirical research shows a steady growth of studies examining morality and its associated factors, including the time of day-- hypothesizing that due to moral disengagement, people are more likely to engage in immoral behavior later in the day compared to the morning. In order to examine the effect of time of day on a person's morality, we replicated a study by Smith and Kouchaki (2014) where participants were given a visual-perception task and a reward to test how often they would engage in immoral behavior (cheating) provided that it was compensated with a greater reward. The original study confirmed their hypothesis, finding that people cheated way more in the afternoon than in the morning. Our replication did not match these results-- meaning that there was no effect of time on morality in our study.

**Psychology - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)**

**Kathryn Brien**

*Mental Health Training at Dominican University*

Tina Ritzler

Mental Health First Aid (MHFA) has been shown to increase confidence in understanding of mental health and help-providing behavior in schools (Massey, Brooks, Burrow, 2014; Hart et al., 2018). Dominican University students may benefit from more informed peers, faculty and staff who could intervene at the beginning of a mental health crisis and who feel comfortable providing support and directing students to resources. To assess the impact of MHFA at DU, a group of students, faculty and staff were trained in January of 2019 and another group will be trained in August of 2019. These trainees complete a pre-test, post-test to assess attitude change and a 6-month, and 12-month survey after training to measure MHFA knowledge and help-providing behaviors. Preliminary results will be presented and discussed.

**Psychology - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)**

**Juanalris BorregoSolis, Emily Sanabria**

*Understanding How Framing Racial Inequality Affects Racial Attitudes: A Replication Study*

Tina Ritzler

The study was a direct replication of a study conducted by Powell, Branscombe, and Schmitt (2005). Their results suggest that when inequality is framed from a "white privilege" rather than a "black disadvantage" perspective. White individuals are more likely to feel collective guilt and demonstrate less racist attitudes. Osnaya, Gaona, and Lopez (2017) found the opposite effect in their replication. Powell et al. (2005) included typical college-aged students, while the Osnaya et al. (2017) replication included participants who were ages 18 to 72 years old. There will be 400 participants from Dominican University, Concordia University of Chicago, the College of DuPage, and Northwestern University in the state of Illinois. White individuals will be asked to indicate their level of agreement, using a 7 - point scale, with 24 statements about racial inequality. These statements describe racial inequality as Black disadvantages or White privileges. White individuals will be asked to write down the different ways in which either they had received privileges because of their race or in which African Americans have been disadvantaged because of their race. Participants will be asked to complete measures of collective guilt and anti-Black

racism and will be asked to complete a White racial identification measure. We aim to assess the validity of Powell et al.'s (2005) results.

**Psychology - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)**

**Irma Arias, Carlos Benitez**

*Gender Inequality and Sexism: A Constructive Replication of Powell et al. (2005)*

Tina Ritzler

The purpose of this study was to conduct a constructive replication of Powell et al. (2005). Using Powell's methodology, this study sought to determine the effects of gender inequality framing (Man Privilege or Woman Disadvantage) and racial group category (white or POC) on sexist attitudes. A sample of 39 male students from Dominican University was gathered and randomly assigned to either the Man Privilege or Woman Disadvantage condition. Sexist attitudes were measured using the Sexism Scale (adapted from Powell's Modern Racism scale, 2005). This study found that neither condition nor racial group category affected the report of sexist attitudes. A larger sample would help to solidify this study's findings. Though limited, the current study provides us with some direction in approaching teachings of privilege to help reduce -isms in our society.

**Psychology - Poster Presentation (10:30 – 11:30 a.m., Parmer Atrium)**

**Norma Chavez, Milena Collazo**

*Family and Cultural Identity Matters to Higher Education Students*

Tina Ritzler

Family and cultural identity are two major factors that either help or hinder the college success of students. Some students come from a large family, while others are limited in family members. For this reason, each individual was asked to define what family means to them. In this study we explore the many characteristics that influence students' success in college. Researchers interviewed 15 incoming freshman at Dominican University. Each participant were asked about themselves, their culture, and their family. It was found that the major influences on students' making it to college were their family and their cultural identity. In most cases, family provided emotional and monetary support, although some families were not able to provide educational support. Cultural identity was both beneficial and a challenge to students. As Dominican University is a Hispanic Serving and diverse institution, most students are minorities and consider their culture to be empowering, even as they confront cultural stigma.

## Sociology and Criminology

**Criminology – Panel Presentation (1:30 – 2:20 p.m., 107 Parmer Hall)**

**Lizbeth Arellano, Estrella Carrillo, Alyanna Marie De Los Reyes, Erick Esquivel, Andrea Galvan,**

**Jacqueline Ramirez, Itzin Ruiz, Stephanie Valladares**

*Crimmigration: Analysis from Courtwatch Class*

Michelle VanNatta

This panel will analyze and discuss observations from court-watching at criminal courts in Cook County and DuPage County, and the immigration court in downtown Chicago. We will discuss the following themes: family separation, different rights and processes between immigration and criminal court, access

to attorneys, racial profiling in immigration and criminal court, media criminalization of immigrants, role of women and gender issues in the courts, difference between public defenders and private attorneys, ICE presence and tactics in apprehending people in and around criminal court, and availability of resources such as language interpreters. IRB 2017-258

## Theology and Pastoral Ministry

**Theology and Pastoral Ministry – Panel Presentation (9:30 – 10:20 a.m., 115 Parmer Hall)**

**Billy Castro, Alex Dumitrescu, Alexandra Rozhon, Rebecca Simon**

*St. Augustine: Political Theologian For Today?*

William George

This semester, four panelists have joined their fellow students in THEO 354/POSC 338 in seeking to answer this question: Can Saint Augustine, one of the most important theologians and writers in the history of the West and beyond, speak to us in our own politically divided and troubled times? Augustine's influence extended far into the political realm as he addressed such issues as education, criminal justice, economic relations, war and peace, the breakdown of civil society - including the fallen Roman Empire - and the relation between "this world" and what he called the "heavenly city" or the "city of God." After a brief introduction to Augustine by one panelist, the others will present "News Briefs" that focus on critical political issue today, asking what Augustine might say to these issues that we should listen to before it is too late.