Dear Made in Millersville Presenter or Attendee,

Thank you for actively communicating your work, supporting the work of others, and for appreciating the extraordinary variety of excellent work produced at Millersville University. Over 50 oral presentations and 200 poster presentations are waiting to pique your interest and curiosity. I hope you find our student’s work fascinating and I strongly encourage you to ask plenty of questions as you take part in this celebration of our campus academic life and community.

Our exhibition of student research and creative work provides the time and space for authentic reflection on the many high-impact educational practices that are part of a Millersville University education. High-impact practices like the collaborative Student-faculty creative and research activities featured at Made in Millersville, provide invaluable benefits to students, to faculty, and to the larger campus community. For students, these benefits include an increased sense belonging, a greater understanding of academic disciplines, and the development of skills critical to college and workplace success such as improved communication skills and the ability to work collaboratively. Most importantly, participation in high-impact practices provides students with increased confidence and persistence when confronting complex problems, the discovery that “negative outcomes” are natural parts of both research and skilled performance, and, that actively learning from mistakes is useful in advancing one’s skills, abilities, and achievement goals.

If this is your first Made in Millersville, or your 5th, I hope that you will see how vital your support of this event is toward maintaining, and building upon, our diverse academic community of scholarship, discourse, and understanding. As you interact with students, faculty, and community members, please remember to ask them questions about their work. You will honor them with your questions; most people love to discuss their work they have vested with relatively large amounts of thought, time, and effort. Consider asking questions, such as: What do you hope that the audience will take away from your work? What did you enjoy the most about your work? Do you plan to continue work related to this field of study? Why? Think of questions as conversation starters, not as pop-quiz questions. The questions are here to engage with you and look forward to the opportunity. As you end your time at Made in Millersville, I encourage you to provide students, faculty, and community members with any of your constructive feedback. We value your voice. And, we are always looking for new ideas related to our projects, related to strengthening this event, and related to increasing support for student-faculty research and creative activities. Also, I encourage you to express authentic gratitude to any student, faculty, or community member that has helped you to gain new understanding or insight.

Sincerely,

Steven Merwin Kennedy, PhD
Assistant Provost, Chemistry and Faculty Coordinator for High-Impact Practices | Millersville University

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**SCHEDULE**

**7:30 a.m. - 4 p.m. | REGISTRATION**

8 a.m. - 4 p.m. | CONCURRENT PRESENTATIONS, POSTERS, EXHIBITS

4 p.m. - 5 p.m. | SOCIAL HOUR

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**COLLEGE OF ARTS, HUMANITIES AND SOCIAL SCIENCES**

Keirstyn Allulis, History (BA) | Poster | 9:25 a.m. - 10:40 a.m.

**WOMEN UNDERCOVER IN THE AMERICAN CIVIL WAR**

This paper is focused on women posed as men as well as women working as spies during the American Civil War. This paper will look at their lives during the war, but also how they fought for recognition after the war.

Meredith Batzler, Art & Design (BDES) | Exhibit | 10:50 a.m. - 12:05 p.m.

**HORIZONS**

This exhibit is a small compilation of my own working containing original photography, digital drawing, and paintings. The subject matter follows the many horizons in my life that I have been lucky enough to witness and document ones that continue to inspire me every day and make me the goal-oriented student I am today. The connotation of a “horizon” to me is something you are always hopeful in reaching, but changes wherever you are and continues to stay in front of your gaze. This personifies hope, hard work, and the concept that life is a ever-changing, adventurous, battle, no matter how complicated the life, time is the most powerful healer, and you will always have a new horizon to look forward to, possibly just right around the corner. Life is about chasing those horizons and seizing opportunities that present themselves to us.

Emily Bland (BSE), Mary Pannrello (BA), Hannah Yonker (BSE), Foreign Languages | Presentation | 9:25 a.m. - 10:40 a.m.

**SORRY ENGLISH ONLY: A PROPOSITION TO PROMOTE SPANISH-LANGUAGE LEARNING**

When someone does not learn a second language, they blatantly succumb to the active stereotypes of said languages. Learning a second language can positively affect one's life socially, culturally, occupationally, and even intimately. The common phrase in today's society states, "You are in America, speak English." In this article, we will combat this idea by proposing various advantages to learning the Spanish language. While discussing the arrival of the Spanish language to the Americas and the current substantiated stereotypes surrounding the language, we will contrastingly introduce the overall benefits of learning Spanish.

Dr. Kirsten Bookmiller, Government and Political Affairs | Class Panel Presentation | 8 a.m. - 9:15 a.m.

**OLD AND NEW CHALLENGES IN INTERNATIONAL LAW**

This session will feature student research into the public international law treatment of current, pressing global issues, including internet censorship, multinational corporate responsibility related to human rights and acts of genocide. It will highlight contemporary challenges in international law development and enforcement in these three policy fields, as well as possible future pathways in each area. The students presenting completed semester-long research case studies during the Fall 2017 semester in their GOVT 351: International Law course.

Presenters' names are: Jena Sharpe, Brandi Conrad and SydneyWilcoxson.

Michael Brockett, Multidisciplinary Studies (BA) | Presentation | 1:10 p.m. - 2:25 p.m.

**SOCIAL MEDIA IMPACT ON COLLEGE SUCCESS AND PERSISTANCE RATES**

Social media has become a routine part of life, however what impact does this have on a college student's academics as well as their collegiate experience. Research has shows both positive and negative correlations between usage of social media and their grades and retention. Through studying this research and applying these ideas to the Millersville University community, we can explore what impacts social media has on our own students.

Hannah Campbell, History (BSE) | Poster | 3 p.m. - 4 p.m.

**REBELLION AGAINST THE HYDRARCHY: THE FIGHT AGAINST BRITISH MERCANTILIST POWER IN THE ATLANTIC**

Pirates and smuggling, the ugly reality of the Atlantic maritime economy in the eighteenth century. These illicit activities were portrayed as greedy and violent acts both during their time, and often are still. But, there is more beyond the surface of the propaganda that the British government put forth. This research looks to delve deeper into the causes of piracy and smuggling in the Atlantic, and to prove through firsthand accounts that these were acts of rebellion against a corrupt British mercantilist system.

Lyric Carter-Bey, Communication & Theatre (BS) | Presentation | 10:50 a.m. - 12:05 p.m.

**HOW DOES SOCIAL MEDIA MAINTAIN "WHITE INNOCENCE" AND ENFORCE "BLACK DEVIANCE"?**

The purpose of this research is to determine the social climate involving the influence of social media, such as Facebook and Twitter,
on students perception of “white innocence” and “black deviance” (Eastman, 2015). Using a campus wide survey, we will compile data on students perception of “white innocence” and “black deviance. ”

Alexis Chin, Foreign Languages (BA) | Presentation | 9:25 a.m. - 10:40 a.m. THE EFFECT OF PEDAGOGICAL RULES IN THE ACQUISITION OF GERMAN REFLEXIVE VERBS

The usefulness of explicit grammar instruction and its place in the foreign language classroom have been widely debated with many expert opinions on all sides of the spectrum. This study investigates the helpfulness of pedagogical grammar rules in the acquisition of reflexive verbs in German. The interesting aspects of reflexive verbs include their frequent usage in German, the lack of true reflexive verbs in English, and the common instruction of this grammatical structure in elementary German language classes. To investigate this question, an experiment was conducted. Before the unit about reflexive verbs, the students in an intermediate level German class took a pre-test to assess their prior knowledge. This pre-test tested the students ability to use the reflexive verbs correctly with the given sentence fragment and picture prompts. The post-test consisted of two parts; the first part used the same structure as the pre-test, and the second part examined the students’ knowledge of the pedagogical grammar rules from class. For the analysis, the data was analyzed on two different accounts. Firstly, a comparison between the results of the pre-test and post-test measured the gains in knowledge due to the instruction in class. Secondly, the data from the post-test was used to investigate whether or not there is a correlation between student ability to use the reflexive verbs and to answer the grammar questions correctly. Finally, interviews with willing students were conducted to investigate what helps various students to learn a foreign language. Through this study, I hope to learn to what helps students acquire a language.

Joe Codispoti, Music (BSE) | Presentation | 9:45 a.m. - 10:40 a.m. LEARNING THE LANGUAGE OF THE JAZZ VIBRAPHONE

This research project will focus on jazz education through the study of a mallet instrument called the vibraphone. Most instructional texts focus on the study of style, genre, and great vibraphone players of the past. This project looks to explore how one can teach the language of jazz on a mallet instrument in a one on one setting. The project was done using an oral history methodology. Interviews with professional performers and educators of the vibraphone, in which they share their insights, will be a prime source of information. Articles and previous research will be considered to draw conclusions as well. Common practices and their relationship to the history of jazz will be analyzed and presented.

Dr. Caleb Corkery, English | Class Panel Discussion | 1:10 p.m. - 2:25 p.m. HIP HOP: INTEGRATION & EXPLOITATION

Student presenters will use intersectionalist feminist theory to analyze contemporary hip hop.

Presenters’ names are: Eugene Thomas, Stassy Bonhomme, Evelyn Dals, Sandra S Molina-Hill, Davaian R Gunner, Skryler E Gibbon and Elizabeth D Wright.

Dr. Caleb Corkery, English | Dramatic Performance | SPOKEN WORDS

Spoken word performances from campus present their work.

Presenters’ names are: Skyrle E Gibbon, Sean H Domicent, Krystal A Lowery, Jessica A Garrison, Ryan C Harvey, Taylor L Schaal, Kyle M Copenhaver, Rachel S Cubbage-Opalski, Xiao Tian Wang, Alyssa C Matchett and Shamera Burbank Green.

Kiana Corley, Music (BA) | Presentation | 10:50 a.m. - 12:05 p.m. “HOW COULD YOU POSSIBLY ASK ME TO JUSTIFY MY SELF-IDENTITY” AN ORAL HISTORY STUDY OF SELF-IDENTITY AMONG PROFESSIONAL VOCALISTS

This research study looks at the relationship between a vocalist and his/her self-identity. This oral history-based project includes interviews from professional vocalists on their developmental journeys in music and self-identity. These narratives fit under a minority category, such as females and performers of color. This project focuses on elements such as assumptions of styles based on factors such as race, as well as how a singer’s background affects their current musical aspirations. Some findings include a lack of connection between the current style of the performers and their musical surroundings during their childhood, as well as how their sense of self either negatively or positively contributed to their music as a whole. This presentation will explore literature related to self-identity in music performance, along with the possible issues with race and gender-based assumptions in the professional field of music.

Miguel Cruz-Cuevas, Art & Design (BFA) | Demonstration | 10:50 a.m. - 12:05 p.m. ATOLLS IN THE ARTIC

A presentation and model of a structural design that could help the arctic lower surface water temperatures and reflect light back into space.

Dr. Robyn Davis and Dr. Tracey Weis, History | Class Project | 8 a.m. - 9:15 a.m. THE (ART AND) CRAFT OF HISTORY

Interested in American History? Come talk to us! History and Social Studies Education majors present the results of their semester-long research projects into all manner of American history, from the War for Independence to the War on Terror.

Presenters’ names are: Samantha Berry, Jacob Brubaker.

Dr. Robyn Davis, History | Class Posters | 1:10 p.m. - 2:25 p.m. THE (ART AND) CRAFT OF HISTORY

Interested in American History? Come talk to us! History and Social Studies Education majors present the results of their semester-long research projects into all manner of American history, from the War for Independence to the War on Terror.

Presenters’ names are: Grace Bachism, Cam Boykin, Tre Brown, Robi Cohn, Matthew Ciclo, Lisa Crum, James Cunningham, Brice Grajales, Michael Keen, Jonathan Kreider, Zachary Miller, Brian Mutterpaugh, Victor Pitt, Rachel Shawkey, Alex Slick, Michael Stock, Caroline Weber and Michael Wust.

Domenic DeSimone, English (BA) | Presentation | 1:10 p.m. - 2:25 p.m. PRISONER CITY: LANCASTER CITY’S ROLE AS A P.O.W. PRISON DURING THE AMERICAN REVOLUTION

The winter of Valley Forge, the defeat at Brandywine and the signing of the Declaration of Independence in Philadelphia have long represented Pennsylvania’s role during the American Revolution. However, our very own Lancaster city played a crucial and dynamic role during the revolution, playing host to thousands of British and German prisoners of war from 1777-1783. While prisoners of war are conventionally kept in tightly guarded barracks far away from civilian life, Lancaster was forced to be different. Unprepared for the sudden influx of prisoners they were being tasked to house, Congress instructed the citizens of Lancaster to let the prisoners walk among them in the town as a show of goodwill. Prisoners were free to walk within the confines of Lancaster city, with some officers even housing with elite families. The unique way that Lancaster dealt with their new identity as a prison town would drastically change the lives of the cities residents, forever altering the city that many of us call home today.

Catherine Dillon, English (BSE) | Dramatic Performance & JOY

The session will be a poetry reading/spoken word performance centered around the idea that among the tragedies of life there is joy.

Felicia Domínguez, Art & Design (BFA) | Exhibit | 2:35 p.m. - 3:50 p.m. THE ENVIRONMENTAL IMPACT OF TAMpons

Conceptually my work has revolved around the female experience, mostly my own experience as a woman in society. I am interested in how society views women, how men view women, and even how women view themselves. For my BFA show, a required capstone for all BFA majors, I would like to display new artwork demonstrating the research that I have collected over four months regarding the environmental impact of tampons. Recently I have been doing a lot of personal investigation of the tampon industry and I have become very curious about its products and female consumers. I am concerned about how much waste comes from disposable tampons and their plastic applicators and where they end up in the environment once they are used and tossed out. This cannot be good for our environment, so I want to display a numerical representation of just how many tampons one woman uses in a span of a single year. According to my research, the number is approximately 240. I think this information is beneficial to all, not just women but we as a society should be aware of how we are impacting our environment.

Michael Duncan, Music (BA) | Performance | 8 a.m. - 9:15 a.m. CRESCENT CITY JAZZ FESTIVAL

A presentation about the things that the Jazz Ensemble saw and experienced in New Orleans at the Crescent City Jazz Festival. Includes a performance from our small jazz combo that played for critics in New Orleans.

Janelle Evans, Government and Political Affairs (BA) | Presentation | 2:35 p.m. - 3:50 p.m. PRESIDENTIAL RESPONSES TO PROTESTS: A DISCOURSE ANALYSIS

In my Press and Society class last semester, we each were assigned to do a final presentation. The content could be of our choosing, however, it had to relate in some way to media and its affect on our society. Being a person of color, I chose to present on the differing Millersville University | www.madeinmu.education | @madeinmillersville
ways of reporting when it came to the Ferguson shooting. Not only
was I interested in how media outlets like CNN and Fox reported the
devastating story, I was also concerned as to how President Obama
responded at the time and how he chose to calm the fears of America
and their hatred towards seemingly racist cops. With this presentation
being only five minutes, I was not able to further explore another
scenario. I also wanted to delve into the Charlottesville riots, and to
determine how a different leader, Donald Trump, chose to speak
out on the events in Virginia. Using actual scripts of both speeches
from both leaders, I will present a discourse analysis on the differing
responses of presidents during times of racial crisis.

Dr. Kerrie Farkas, English | Class Panel Presentation | 10:50 a.m. - 12:05 p.m.
THE POWER OF THE PORTFOLIO: STANDING APART IN FUTURE ENDEAVORs

According to Jacquelyn Smith of Forbes, 56% of employers desire
a portfolio but only 7% of applicants have one. For this reason,
having a professional portfolio to stand out from other candidates across all fields. In this presentation, students will
discuss the benefits of creating a professional portfolio, the process
of creating a professional portfolio, and the different platforms
available for portfolios. Students will also show specific writing
samples they included in their professional portfolios and digitally
display model portfolios with the audience. This session can benefit
any student interested in learning how to showcase their experience,
accomplishments, qualifications, and skills whether they plan to apply
for internships, graduate school or just want to pull together
and organize their work.

Presenters’ names are: Matthew Reichard, Seth Hoffman, Latanya
Jamison, Kaitlyn Cichocki, Conrad Chambers, Helen Reinbrecht, Ellisia
Dommel, Mariza Kouden, Christy Umberger, Amanda Mooney, Kyle
Steffish, Noel Dougherty, Theodore Umble and LeChaun Freeland.

Dr. Christine Filippone, Art & Design | Class Presentation | 10:50 am - 12:05 p.m.
WOMEN IN ART (ART 305) I

Four students will present their research papers for the course Women
in Art, which explores the role of the visual in constructing ideas of
“woman” and how women artists have addressed these constructions
and their works in their lives.

Rose Fisher, Foreign Languages (BA) | Presentation | 2:35 p.m. - 3:50 p.m.
A COMPARISON OF ADJECTIVE ENDINGS IN PENNSYLVANIA GERMAN AND STANDARD GERMAN

Pennsylvania German, also known as Pennsylvania Dutch or the
language of the Amish, is a language that is closely related to
standard German. The two are different enough, however, to make
communication difficult. The purpose of this study is to explore one
aspect of those differences, adjective endings, which are a complex
grammatic feature of German that does not exist in English. The data
was gathered by having a total of nine participants, three from three
different generations, record an oral narration of several picture
stories in Pennsylvania German. The narrations were transcribed
and all contexts in which adjectives were used were analyzed. All
participants are either Amish or formerly Amish and all are fluent in
both Pennsylvania German and English. This study examines how the
use of adjective endings in Pennsylvania German differs from standard
German, how it may be different between generations of speakers,
and how it may have been influenced by English. As a native speaker
of Pennsylvania German, I am interested in learning more about how
languages change within a bilingual community.

Aspen Frey (BA), Chelsea McMaster (BA), Jessica Sneddon (BFA), Art & Design | Exhibit | 1:10 p.m. - 2:25 p.m.
RELATIVE MISS-INTERACTION?

Function is relative, it becomes ambiguous through the abstraction of
form. A vessel’s visual aesthetic can change how the viewer interacts
with it. This affects how it correlates with functionality. ‘Relative Miss-
interaction’ is a combination of wooden and hand-built pieces
with a cross-section of natural and man-made pieces shown through
the ceramic vessel. Each is an example of different iterations of the
same shape portrayed as a decorative, sculptural or utilitarian form.
This is an exploration of the variances with which functionality is
misinterpreted.

Dr. Christine Filippone, Art & Design | Presentation | 2:35 p.m. - 3:50 p.m.
WOMEN IN ART (ART 305) II

Four students will present their research for this art history course,
which explores the role of the visual in constructing ideas of “woman”
and how women artists have addressed these constructions in their
works and in their lives.

Dr. Christine Gaudry, Foreign Languages | Class Presentation | 10:50 a.m. - 12:05 p.m.
FRENCH BEYOND FRENCH BORDERS

Did you know French is the official language in 29 countries, which
puts it in second place behind English? Did you know about 330
million people in the world speak French? Did you know French
has become the sixth most widely spoken language in the world,
following Mandarin Chinese, English, Hindi, Spanish and Arabic? Did
you know approximately 120 million students are currently learning
French? Did you know France has won the most number of Nobel
prizes in literature? Please come and join some French majors and
minor who will tell you about the literature of French-speaking
countries beyond the borders of France.

Presenters’ names are: Alex Busque, Carmen Estrella, Jorge Mora,
Mallory Chaney and Taylor Fjelkowski.

Maria Glotfelter, English (BSE) | Presentation | 8 a.m. - 9:15 a.m.
USE AND PERCEPTION OF GOOGLE TRANSLATE IN THE CLASSROOM

Computer translation tools are becoming more sophisticated and
accessible. As technology advances, it could take a more central role
in the classroom. The purpose of this study is to explore the potential
use of computer translators as instructional tools for learning languages.
The main research questions of this study concern student and
teacher perceptions of computer translators as well as student’s use
of them. Additionally, this study offers a brief background on the history
of machine translation and its past roles and uses in the classroom.
Past studies indicate that students frequently use computer
translators and sometimes have inaccurate perceptions about them.

Google Translate was chosen as a tool to gauge student perception
and use of computer translators. Participants took an online survey
regarding their usage and perception of Google Translate. Follow-up
interviews with students were conducted with volunteer student participants. To
gauge teacher perception, interviews were conducted with professors
of foreign language. I will analyze the survey and interview data with
the goal of making pedagogical recommendations for both teachers
and students.

Mary-Kate Helm, English (BSE), Jessie Garrison, English (BA), Eilish McCaul, Music (BA) | Poster
10:50 a.m. - 12:05 p.m.
THE ISSUE OF THE LACK OF FEMININE PRODUCTS AVAILABLE TO HOMELESS WOMEN

During our presentation for Made in Millersville, there will be two
various parts of the presentation. The first part will center around why
lack of access to feminine products in the city of Lancaster is such
an issue. We will be retrieving this information by doing research as
well as going to homeless shelters and interviewing women on their
experience with this issue. Our second part of the presentation will
focus around what we did to make a difference in the community and
we made our plan of action sustainable.

Kaylee Herndon, Multidisciplinary Studies (BA) | Poster | 8 a.m. - 9:15 a.m.
A DIFFERENT SPACE

The work I will be presenting is a feature-style profile piece on
Elizabethtown College’s Writers House and its director, Jessie
Waters. I would go over the story’s content, the interviewing and
writing process, and the design layout process in terms of format for
publication during the presentation.

Jeremy Garling, Economics (BA) | Poster | 12:05 p.m. - 1:10 p.m.
IMPACT OF SUNK COSTS ON CONSUMER DECISION MAKING

Sunk costs are costs that can not be recovered once they are spent.
The sunk cost effect is the effect where people are more likely to
reinvest into something that they have already put time or money into
because they do not want to admit that they were wrong. My thesis
looks at comparing a price club to other shops and seeing if subjects
can correctly choose which option is the best for them every round.

Haakon Hirt, Art & Design (BDES) | Exhibit | 1:10 p.m. - 2:25 p.m.
GRAPHICS FOR THE FILM INDUSTRY

For this project, I will be designing the graphic elements of three-
dimensional movie props that would be used in the creation of a
hypothetical film, going from a rough concept to final product with
every detail being considered. Using Illustrator, Photoshop, and
knowledge of packaging design, I will make these come to life in a
display that will look screen-ready and polished.
forms with industrial materials. My process includes use of the laser

Dr. Lexi Hutto, Management & Marketing | Class Presentation | 8 a.m. - 9:15 a.m.
MINI-ADVERTISING CAMPAIGN FOR CLARE HOUSE NO. 1

Seventeen student ad agencies from Dr. Lexi Hutto's Advertising classes in the fall of 2017 each created a mini advertising campaign for one of three local non-profit organizations: A Week Away, Clare House, or NuLife@ Nimble Thimble. Our student ad agency, Amy Advertising, prepared a mini campaign for Clare House. We developed

Dr. Lexi Hutto, Management & Marketing | Class Presentation | 8 a.m. - 9:15 a.m.
MINI-ADVERTISING CAMPAIGN FOR CLARE HOUSE NO. 2

Seventeen student ad agencies from Dr. Lexi Hutto's Advertising classes in the fall of 2017 each created a mini advertising campaign for one of three local non-profit organizations: A Week Away, Clare House, or NuLife@ Nimble Thimble. Our student ad agency, Amy Advertising, prepared a mini campaign for Clare House. We developed

Dr. Katarynza Jakubiak, English | Class Posters | 1:10 p.m. - 2:25 p.m.
NEW DIMENSIONS OF WORLD LITERATURE: WHAT CAN WE LEARN FROM WRITERS FROM AFRICA, ASIA, THE CARIBBEAN AND THE MIDDLE EAST.

This poster presentation will introduce the audience to selected contemporary literature from Africa, the Caribbean, East and South Asia and the Middle East. The presenters will give overview of cultural and historical contexts of the selected works and discuss major topics and literary techniques present in these works.

Dr. Katarynza Jakubiak, English | Class Presentation | 2:35 p.m. - 3:50 p.m.
THE POWER OF CREATIVE WRITING

Students who were enrolled in ENGL 471 Creative Writing in Fall 17 will read their poetry, short stories and creative non-fiction.

Jess Jansen, Art & Design (BFA) | Exhibit | 9:25 a.m. - 10:40 a.m.
ART STORY

I would like to install a sculptural painting that combines organic forms with industrial materials. My process includes use of the laser engraver in the MU Art Dept. This engraver is a powerful creative tool and I would like to share my results with the other design students.

Alexandra Jean-Paul, Sociology & Anthropology (BA) | Presentation | 9:25 a.m. - 10:40 a.m.
COLLEGE STUDENT EXPERIENCES & ATTITUDES TOWARD LAW ENFORCEMENT AS A FUNCTION OF GENDER AND RACE

Recent events involving African Americans and law enforcement has resulted in an examination of the experiences of African Americans with law enforcement. Research has shown that gender and geography impact these experiences (Brunson and Miller, 2006). These differences in experiences will certainly impact attitudes towards law enforcement as has been found (Regular, Jackson and Taylor, 2014) and subsequent behavior which may result in further negative and even fatal results. The purpose of this study was to examine the impact of gender and geographical (urban vs non-urban) origins on experiences of African American and European American college students at a predominantly white university (PWW) with the law enforcement. Also, the effect of these experiences on attitudes toward the law enforcement. African American students will have had significantly more negative experiences with law enforcement than European American students as measured by the interaction with the Police subscale and the Police Behavior subscale. The author hypothesized there will be a significant negative correlation between positive attitudes toward the police and negative behavior by the police and African American students will have had significantly more negative experiences with law enforcement than European American students. This is discussed in terms of the safety of African Americans.

Megan Jones, Art & Design (BDES) | Exhibit | 1:10 p.m. - 2:25 p.m.
CHILDHOOD NOSTALGIA

Using the technique of stop-motion, I created an animation based off of retro video games I played as a child. The idea is to give the viewer a sense of childhood nostalgia for both of the games.

Chantel Jones, Sociology & Anthropology (BA), Caseem Luck, Government and Political Affairs (BA), Kelli Miller, Social Work (BA) | Round Table | 10:50 a.m. - 12:05 p.m.
ETHNIC EXPERIENCES IN HIGHER EDUCATION

Our country's educational system is supposed to focus on helping the people residing in the United States to grow, learn, explore diverse people and experiences, and be granted more opportunities in life. In today's society having a college degree is important because it secures that a person will have a higher level career and greater salaries. The access to higher education in America has changed, allowing all students to have the ability to go to college and obtain a degree. These three qualitative research methods were used to identify students of color, with a concentration within the immigrant and refugee community, to gain knowledge along with perspective on our students' adjustment and experiences at a predominately white university.

Matthew Latschar, History (BA) | Poster | 9:25 a.m. - 10:40 a.m.
THE BONUS ARMY: HOW MISCOMMUNICATION REALLY FORCED THE VETERANS OUT

This senior seminar research paper has been prepared for HIST 406, the capstone course for history majors.

After the First World War, veterans returned to a country that was paying civilian workers more than what they were making while risking their lives in Europe. After much deliberation and legislative setbacks, a bill passed in 1924 promised -adjusted compensation- for veterans. However, it was not to be paid in full until 1945. In the summer of 1932, thousands of veterans known as the Bonus Expeditionary Force, led by former Army Sergeant Walter W. Waters, descended upon Washington D.C. to demand the immediate payment of their promised -bonus-. They would develop rudimentary camps and use their disciplined yet passive lobbying techniques to advocate for their bonus. However, as the bill was defeated and the practicality of maintaining in Washington until they received their bonus began to wane, tensions began to rise. Officials, including the Hoover administration, the district commissioners, and the Army, all feared a communist influence on the group. In their minds, a revolution was in the air and decided action was needed. Tensions finally broke on July 28 when during an evacuation order, the Army under Chief of Staff Douglas MacArthur was called in to maintain order and drive the veterans out of buildings along Pennsylvania Avenue. The veterans were forced completely out of the city and their camps reduced to ashes and rubble. This operation virtually ended the Bonus March in one swift action.

Jasmin Leath, Communication & Theatre (BS) | Poster | 8 a.m. - 9:15 a.m.
THE EFFECT OF COMMUNICATION ON INFIDELITY RATES WITHIN ROMANTIC RELATIONSHIPS

Communication is a fundamental item in the perpetuation of relationships. Not only is communication important, there are also many ways individuals can choose to communicate with one another. In this century, communicative infidelity has become a common dispute among romantic partners. Romantic infidelity occurs when a person feels love and affection for both their spouse and another person or a partner breaching a loving emotional attachment to their spouse and develop romantic feelings for another person, even while maintaining their marriage or current relationship to make things work. Learning more about how individuals communicate within romantic relationships will aid in lowering the rate of divorce in the United States. It could also potentially have major implications in the fields of education and counseling. By knowing this, it can help individuals understand the emotional and physical effect of their words upon their loved ones.
The students will share their experiences in launching start-ups at Millersville University.

Presenters’ names are: Danielle Di Stefano, Symone Nelson and Samuel Manning.

Cassian LeJeanne, Naikae Sexton, Communication & Theatre (BS) | Poster | 1:10 p.m. - 2:25 p.m.

THE PORTRAYAL OF AFRICAN AMERICAN MEN IN THE MEDIA

This study focused on the portrayal of African American men throughout different forms of media. African American men have often been misrepresented throughout media. The depiction of African American males through media has been shaping the minds of their consumers for years (Kulaszewicz, 2015; Center for Media and Public Affairs, 2011). This study focused on the opinions of African American men created through media. Findings unravel the images of African American men through stereotypes. These images of African American men as athletic, not intellectual, violent, over-sexed and possessed of amazing strength, drug dealers and gangsters. This has significant implications for African American men as targets by law enforcement and others.

Presenters’ names are: Benjamin Schad, Cullen Feister, Sean McGeehan, Tess Isonoco, Rachel Baker and Jim Caliabria.

Cassian LeJeanne, Naikae Sexton, Communication & Theatre (BS) | Presentation | 8 a.m. - 9:15 a.m.

CDLEJEUN@MILLERSVILLE.EDU

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Nichole Michels, Communication & Theatre (BS) | Poster | 2:35 p.m. - 3:50 p.m.

LOCKED UP: COMMUNICATION BETWEEN CHILDREN WITH INCARCERATED PARENTS

My poster talks about the impact incarceration has on kids when their parents get sent away. It not only impacts them financially with one less parent to care for them, but mentally as well.

Bryanne Minnella, Music (BSE) | Poster | All Day

THE RIVER \( \to \) DIRCH SCHÖNE MÜLLERIN - PERFORMANCE, APPLICATION AND ANALYSIS OF A MAJOR ROMANTIC ERA SONG CYCLE

The Romantic Era was a period of intentionally fragmented beauty, sublime ruins, and some of the most disturbed, tragic works to ever bless the music world. Die schöne Müllerin, or The Beautiful Miller, is a collection of twenty songs by Franz Schubert that embodies not only the probing delicacies of this era, but the musical embellishments that make this time period so impactful. Alongside my classmates, I will be providing my peers and our audience the opportunity to experience a key Romantic Era work performed in its entirety by giving a special research production of Die schöne Müllerin.

Recognizing its significance, I will be analyzing the twenty piece song cycle and give a presentation to the class about its historical background. I will then continue to explain my aural and visual analysis of the piece by identifying key passages and guiding the students through important analysis points. Next, I guide the students in the course through applying the movable do solfege method to discover important characteristics about the cycle. I will then explicate important structural points and harmonies in the cycle by interacting with a professional accompanist and discovering how the piano and vocal lines interact in a stylistically key way. Finally, each student in the class will be responsible for performing one piece of the cycle at a traditional Schubertiade event, hosted by the class and organized by myself.

Gabrielle Minnich, Art & Design (BDES) | Exhibit | 10:50 a.m. - 12:05 p.m.

PACKAGING DESIGN

This exhibit features my own take on modern packaging design. Since being enrolled in the design program at Millersville, I have had the opportunity to take a Packaging Design class as well as an Advanced Packaging class. These classes, as well as my other core design classes, have prepared me to exhibit this piece in specific. It was originally created during my Fall semester in 2016, but has recently been revamped so that it can be applied to my final design portfolio. The piece itself is my creation of a beer that Victory Brewing Company could hypothetically make and distribute.

Keegan Nash, Art & Design (BFA) | Exhibit | 10:50 a.m. - 12:05 p.m.

INDISCRIMINATE

This piece represents modern day protesting from a cubist perspective. The perspective of a cubist aims to show different viewpoints at the same time and within the same space and so suggest their three dimensional form. In doing so they also emphasize the two-dimensional flatness of the canvas instead of creating the illusion of depth.

The painting breaks down the different points of view that surround protested issues and widens the usually narrow scope on those issues. Rather than focus on a single perspective, it is important for all of us to learn about all sides to prevent ourselves from creating a myopic view. By breaking protest down into three perspectives and fragmenting them throughout the piece it creates confusion for the viewer. This, in turn, forces their eye to explore the piece and search for a meaning within it.

The massive scale of the piece is meant to intimidate the audience, much like the sides of protested topics can be intimidating to look deeply into.

By overcoming the large scale and sorting through the confusion created empowers the audience to look for answers on their own rather than accepting one given to them.

Dr. David Owen, Government and Political Affairs | Class Presentation | 9:25 a.m. - 10:40 a.m.

SOCIAL AND ECONOMIC INEQUALITY ACROSS EURASIA

This panel will address issues of social and economic inequality across Eurasia. The first study investigates the relationship between the environmental consequences of economic development and the formation of social attitudes in China. The second study investigates the relationship between economic development and the movement away from collectivism in China and Japan. The third study investigates the concept of socioeconomic mobility in the three autocratic periods of Russia 'Tsarist Russia, Soviet Union, and modern Russia. The final study investigates German perceptions of prostitution using the cases of Germany and Thailand.

Presenters’ names are: Keara Sanderson, Tristan White, Maria Glotfelter and Becky Feely.

Dr. Justin Mando | Class Round Table | 1:10 p.m. - 2:25 p.m.

SUSQUEHANNA STORIES

In the class Environmental Advocacy, Fall 2017, led by Dr. Justin Mando, I, along with the other students, constructed what we call the River. We would like to present this piece in specific. It was originally created during my Fall semester in 2016, but has recently been revamped so that it can be applied to my final design portfolio. The piece itself is my creation of a beer that Victory Brewing Company could hypothetically make and distribute.

Presenters’ names are: Amanda Mooney, Caitlyn Tynes, Gabrielle Redcay, and Rylan Harvey.

Dr. Prof. James Machado, Communication & Theatre | Class Panel Discussion | 8 a.m. - 9:15 a.m.

MIDNIGHTRUN24, MILLERSVILLE’S FIRST 24-HOUR VIDEO RACE

On Friday, February 9th, 2018, six student teams set out on a 24-hour race to produce, write, shoot, edit and submit short video projects. These projects were judged by a panel of faculty and industry professionals and screened in McComsey Auditorium on Saturday February 10th, 2018. The purpose of the proposed panel is to bring these ambitious projects to the wider Millersville community. Each project, less than 5 minutes per, will be screened in succession. Then, a panel discussion will commence consisting of one representative from each group. The students will reflect on their experience during the race and discuss how their participation would qualify as a high-impact educational practice.

Presenters’ names are: Benjamin Schad, Cullen Feister, Sean McGeehan, Tess Isonoco, Rachel Baker and Jim Caliabria.

Prof. Samuel Manning.

Presenters’ names are: Amanda Mooney, Caitlyn Tynes, Gabrielle Redcay, and Rylan Harvey.

Eric Lee, Social Work (BA), Joseph Brandenburg , Psychology (MS), Abigail Jefferys, Sociology & Anthropology (BA), Anna VanBuskirk, Social Work (BA), Amy Mitchel, School Psychology (MS) | Roundtable | 9:25 a.m. - 10:40 a.m.

COMMUNITY BASED RESEARCH: COLLABORATIVE WORK

This panel showcases the Center for Public Scholarship and Social Change’s community based research projects. The panel will present research on the following topics:

1. An Assessment in Racial Disparities in the Amount of Bail Set in Lancaster County.
2. On Friday, February 9th, 2018, six student teams set out on a 24-hour video race to produce, write, shoot, edit and submit short video projects. These projects were judged by a panel of faculty and industry professionals and screened in McComsey Auditorium on Saturday February 10th, 2018. The purpose of the proposed panel is to bring these ambitious projects to the wider Millersville community. Each project, less than 5 minutes per, will be screened in succession. Then, a panel discussion will commence consisting of one representative from each group. The students will reflect on their experience during the race and discuss how their participation would qualify as a high-impact educational practice.

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Ave Palguta, Art & Design (BA) | Exhibit | 8 a.m. - 9:15 a.m.
INSIDE THE STRUCTURE
My piece is from my fine metals class and focuses on different bezel techniques as well as a complex design. This piece is a ribbage necklace that will have a detachable set of lungs inside. I will be pairing it with a poster of how to sketches and more information on the piece.

Taylor Payne, History (BSE) | Presentation | 3 p.m. - 4 p.m.
HARRY HAMILTON LAUGHLIN: CRUSADER FOR THE EUGENIC CAUSE
Harry Hamilton Laughlin was a prominent eugenicist during the early to mid twentieth century. It was due in part to his diligence and effort that eugenics sterilization and institutionalized flourished throughout the first half of the twentieth century. This paper explores Laughlin's effect on the eugenics movement, as well as his role in bridging American eugenic ideals and Nazi social policy.

Tyler Peak, Sociology & Anthropology (BA) | Poster | 1:10 p.m. - 2:25 p.m.
POSTMODERN RELIGION WITHIN THE CONTEMPORARY UNITED STATES
While religion was once the heartbeat of American social life, religious beliefs and identities have become increasingly more private. It appears that religious identities have lost the cultural capital they may have had a few decades ago. Although religion has become more implicit, the institution of religion has experienced the same postmodern characteristics as the other social institutions. These characteristics are: fragmentations, total commodification, (in) security, (dis)connection, and nostalgia. While most other studies focus on westernized European countries, this project focuses on the contemporary United States due to the fact many scholars consider the United States as a deviant case. The United States is simultaneously post-industrialized and religious. Instead of asking why the United States is considered a deviant case, we examine how these postmodern traits have fostered a post-industrial and religious society. As for other scholars, their focus shifts to religiosity and secularization. Though not the focus of this study, I contend that spiritual movements should not be considered religious movements. In regards to secularization, I contend that the current methodology is unfit to determine secularization. One should not study the presence of an institution, rather the institutions pervasiveness. Meaning, one should not study how one behaves within or takes advantage of what the institution offers, rather study how much influence that institution has on an individual's decision making. Adopting this methodology will allow us to determine whether American society is secular or not.

Amira Price, Sociology & Anthropology (BA) | Poster | 12:05 p.m. - 1:10 p.m.
A LOOK AT PERSONAL EXPOSURE TO PARTICULATE MATTER FROM INDOOR SOURCES
Exposure to particulate matter (PM) has many harmful health effects. The objective of this research was to examine how much exposure to PM one has during indoor activities and ways in which exposure can be remediated. To examine how much exposure one would have to particulate while performing activities at home, simulations were run of cooking, burning a candle, vacuuming, and ironing. A nephelometer was used to measure light scattering during the performance of each activity and converted to a concentration of PM. Burning a candle was found to produce the largest amount of particulates, ranging from peak exposures of 9-136 g/m3. Methods for remediation of exposure were tested and resulted in mitigation to a range of 0-11 g/m3. The results of the simulations provide a look at the amount of PM one is exposed to while performing daily activities and the measures that can be taken to reduce exposure.

Gabriella Portelles (BA), Logan Kluth, Chelsea McMaster (BA), Erin Dear (BFA), Ally Christine (BA), Sarita Ricchiuto (BFA), Anna Devonshire (BFA), Michael Shum (BFA), Art & Design (BA) and Carly Shuman, Business Administration (BS) | Exhibit | 2:35 p.m. - 3:50 p.m.
IT TAKES TWO!
While art is often considered a dialogue between the artist and the viewer, the act of collaboration creates a new conversation between its participants. It Takes Two is an exhibition brought to you by Mulls Spring 2018 advanced ceramics students. Each work shown is the result of two artists with different building techniques exploring new creative limits and helping one another's ideas. In this series reflects the transformation that takes place when ideas are shared and creative limits are challenged.

Samantha Raum, Art & Design (BA) | Exhibit | 1:10 p.m. - 2:25 p.m.
CHILDREN'S COLORING BOOK KIT
By using design elements and tools, I was able to create a nature themed coloring book kit. This kit includes the coloring book, colored pencils, a pencil case, stickers, and a plush version of one of the characters. All parts are original designs except for the pencils. Product and children's publication design both are paths I would like to pursue after graduation, so this project is a helpful piece to my portfolio.
Melody Stahl, Music (BSE) | Presentation | 10:50 a.m. - 12:05 p.m.
MUSIC THERAPY FOR CHILDREN WHO HAVE EXPERIENCED TRAUMA; A ORAL HISTORY STUDY
This research study focuses on music therapy methods when working with children who have experienced trauma using oral history methodology with narrators in the field. This presentation will explore relevant literature related to music therapy and narrators life history and current practices and methods. Narrators shared stories of hardships their clients have faced as well as the challenges and the joys of using music therapy with children who have experienced trauma.

Madison Stoutland, Communication & Theatre (BS) | Exhibit | 10:50 a.m. - 12:05 p.m.
STIGMAS IN GREEK LIFE ON MILLERSVILLE’S CAMPUS
I will be presenting from my laptop with a video that shows charts, and videos showing the stigmas that appear in Greek Life on campus through both the eyes of Greek Life members and non-greeks.

Madison Stoutland and Haley Poust, Communication & Theatre (BS) | Poster | 12:05 p.m. - 1:10 p.m.
DEFYING THE STIGMAS - ALPHA SIGMA TAU
We will be presenting a poster with photos focusing on Alpha Sigma Tau defying the stigmas applied to us. Through photography we will capture what society see’s of us, versus what we truly are.

Shaakirah Tate (BA), Alexandra Attinger (BS), Daniel Dicker (BA), Sara Lipski, English (BA) and Mikayla Steele, Art & Design (BA) | Poster | 2:35 p.m. - 3:50 p.m.
FOR THE JOURNAL YOU’VE NEVER HEARD OF...
Interns for the Made in Millersville Journal will unveil the newsletter and display the student work submitted throughout the school year. This display will engage with current and potential authors, as well as showcase the work of Millersville students. It will also serve as the Grand Opening for our new website and social media platforms. The presentation will also integrate the journal with the conference as a whole.

Anna Tran and Chris O’Lear, Music (BA) | Performance | 9:25 a.m. - 10:40 a.m.
TABLE TALK - STRETCHING THE SOUNDS OF A VIBRAPHONE
Performed on a single vibraphone, Table Talk was commissioned by chamber percussionists Ars Duos in 2016. Drawing from the idea of piano “4-hand” music, Table Talk explores the concept of percussion 4-hand utilizing a shared percussion set-up. Preparations include the placing of temple bowls, soda can, crotales, pieces of wood, a metal plate, plastic cup, wood blocks, and small gongs. The piece evolved as an attempt to stretch the idea of what a vibraphone could sound like, from exploiting the subtle timbral shifts of a single note, to masking its identity completely through the combinations of other items placed on top of it.

Kathryn Turner, Communication & Theatre (BS) | Presentation | 8 a.m. - 9:15 a.m.
MILLENNIALS: DRAMA FOR THE DRAMATIC GENERATION
Since ancient Greeken times, Theatre has been one of the highest forms of entertainment and communication. Before the advent of print and broadcast media the only way to share a story was to act it out. Since then, theatre has served to entertain, educate and advocate. Even after the rise of television and movies, people still regularly enjoyed attending stage productions. But when the financial crisis began in 2007 Broadway attendance and patronage began to falter eventually crippling the industry. Predictions abounded that this might be the end of live theatre. Broadway rebounded by seeking out a new generation of theatre goers, the millennials. The shows of the millennials parents and grandparents generations had become stale to this new group of people who wanted life to be fun. Broadway met the challenge and began producing such hits as Mary Poppins and Hamilton. In order to stay ahead of the curve and keep the momentum going we must understand what millennials want from theatre and what the future of theatre is heading. This research seeks to answer the question, What do millennials want from theatre?

Renée Vance, Art & Design (BA) | Poster | 12:05 p.m. - 1:10 p.m.
STUDENT CHARACTERS OF MILLERSVILLE
This project will put focus on one of the most important aspects of Millersville University - it’s students. By first photographing students around campus, I will collect reference material to work with. Then, through digital illustration, I will create artistic renderings of the students I photographed. This will be displayed in a poster format to showcase the essence of Millersville and capture the looks and styles of it’s students in the year 2018.
Taylor Brandt, Psychology (BA) with Dr. Debra Vredenburg-Rudy  |  Poster  |  2:35 p.m. - 3:50 p.m.

CHOOSING INDIFFERENCE: AVOIDING THE COST OF COMPASSION THROUGH MOTIVATED EMOTION REGULATION

Compassion collapse describes the tendency for compassion to decrease as the number of suffering victims increases. One explanation given is that people down-regulate compassion when they believe its cost outweighs its benefits. Our study examined whether priming participants with the expectation of being asked to make a lifestyle change would decrease compassion toward a group of child sweatshop workers. We found that expectation of personal cost did, indeed, result in compassion collapse, providing evidence for the role of motivated emotion regulation, but only when the experience of compassion is believed to be costly.

Peter Dutton, Early, Middle and Exceptional Education (BSE)  |  Poster  |  2:35 p.m. - 3:50 p.m.

ESSA FORECAST FOR THE ARTS

I am studying the state proposals of many states under the federal ESSA. Specifically my study would seek to define a successful and beneficial arts education plan. I will cultivate, with the help of professors and state legislators, a rubric for state proposed arts education plans and forecast which states will successfully increase art educations in their state. I will also explain and explore why arts education has historically been the last education to be considered and funded for in society.

Aziza Griggs, Psychology (BA)  |  Presentation  |  9:25 a.m. - 10:40 a.m.

THE IMPACT OF SOCIAL MEDIA ON ACADEMIC PERFORMANCE AMONG COLLEGE STUDENTS

This study was based on social media and the effects it has on African Americans, Hispanics, and White Europeans. The focus was on the negative effects social media and texting, which can cause a student's academic performance to drastically decrease. College students are constantly on our phones or using the internet. The Previous research (Belur, Nowak, & Hull, 2015; Lee, 2014) explored factors such as the race, student's attitude and behavior toward social media, the amount of time spent daily when texting, and attitudes towards their school work. The data will be collected from Millersville University students, both male and female. There was a sample of 90 students between the ages of 18 and 28, who were African American, Hispanic, and White European. The results supported earlier studies showing that social media sites, such as Facebook, Instagram, and Twitter had a negative impact in college student's academic performance. Since social media is here to stay the question is how to assure that it is utilized to increase academic performance especially African Americans and Hispanic who exhibit higher utilization.

Kristin Hellman, Early, Middle and Exceptional Education (BSE)  |  Presentation  |  8 a.m. - 9:15 a.m.

AIRPORTS: CAR-JACK BOXES: THE PORTRAYAL OF POVERTY THROUGH COMMUNICATION

In this hands on session:
1/W will contextualize the available children's literature featuring poverty
2/W will examine children's literature featuring common themes connected to the representation of poverty and homelessness
3/W will explore the portrayal of poverty in children’s books and offer opportunities for dialogue.

Rachel Henntnick, Psychology (BA)  |  Poster  |  8 a.m. - 9:15 a.m.

PERSONAL ATTITUDES AND PERCEPTIONS OF DRIVING UNDER THE INFLUENCE OF ALCOHOL, DRIVING UNDER THE INFLUENCE OF MARIJUANA AND DRIVING UNDER THE INFLUENCE OF BOTH MARIJUANA AND ALCOHOL IN RELATION TO SENSATION-SEEKING

The goal of this study was to increase understanding on college students' personal attitudes and perceived peer approval of driving under the influence of alcohol (DUI-A), driving under the influence of marijuana (DUI-M), and driving under the influence of alcohol and marijuana (DUI-MA). In addition, the current study aimed to investigate the relationship between college students personal attitudes and perceived peer approval of DUI in relation to the sensation-seeking personality trait. The current study involved 657 Millersville University undergraduate students who completed an online survey. The survey consisted of perceived approval of DUI, personal attitudes of DUI, and frequency of DUI and use of alcohol and marijuana questionnaires, as well as a variation of Zuckerman's Sensation-Seeking Scale. Statistical analysis indicated significant results for a majority of the proposed hypotheses. The results revealed participants personally approved of and perceived peers approved of DUI-M the most and DUI-MA the least, that there is a sex difference in personal attitudes towards DUI, and that there is a correlation between sensation-seeking and both personal approval of DUI and perceived peer approval of DUI-M. These findings support the outcomes of previous research on college student's perceptions of DUI.

Simeon Kulp, Psychology (BA)  |  Presentation  |  8 a.m. - 9:15 a.m.

THE PENNSYLVANIA GERMAN ART OF FAITH HEALING

The traditional healing technique known as Powwowing or Brauche has a long and storied history. The practice incorporates Christian spirituality, traditional magic, faith healing, and sometimes homeopathic healing techniques. The purpose of this project was to provide awareness of important colonial powowers who left a lasting impact on the culture, while also providing an ethnography of a present day traditional powower. The project will analyze the
s is a project of the larger Providence Project which examines cultures and traditions of early America.

This study is an examination of family-of-origin correlates of college student coping. Two specific aspects of family life were evaluated in 104 undergraduate college students: (1) overall family-of-origin environment, and (2) closeness of early student-parent relationships. Additionally, each student participant completed a measure of coping skills. Pearson's correlation was used to analyze the relationship between family-of-origin data and coping strategies, as well as the relationship between closeness of early student-parent relationship and coping skills.

Sidney Miller, Psychology (BA) | Presentation | 9:25 a.m. - 10:40 a.m.  
STIGMA WITHIN AFRICAN AMERICAN AND LATINO COLLEGE COMMUNITIES AGAINST LEARNING ABILITIES

It is no secret that stigma can be a hindrance to anyone who faces it. Ethnic minorities face stigmatization every day because of the inability to hide what causes them to be stigmatized. Those with learning disabilities are also stigmatized (Loe, K., 2011). However, unlike ethnicity a learning disability may not be plainly visible. Being a part of an oppressed group does not prevent the stigmatized from stigmatizing another. This study determined if African Americans and Latino Americans stigmatize those with learning disabilities more than European Americans do. There is a lack of research in the field about the perceptions that people of color hold toward people with learning disabilities. This information is useful in that if the research hypotheses are true, it may benefit students attending college. One stigma held against people with learning disabilities is that they possess generally low ability (May, A. L. & Stone, C. A., 2010). Stigmatization can lead members of the oppressed group feeling invisible and insignificant. Because of this, it is not tasty to believe that people might not like to be stigmatized further. As previously stated, race and ethnicity are already characteristics that elicit stigmatization. By being greatly aware of stigmatization, those who have been stigmatized may have learned to stigmatize others themselves. Therefore, African Americans and Latinos may be more likely to stigmatize people with learning disabilities due to African Americans’ and Latinos’ heightened sensitivity to stigmatization. This research examined two independent variables: a stigmatizing attitude held by the participants. This variable was defined as the stigma toward the person described in the stimulus person description and the gender of the stimulus person’s description. The dependent variables are the race of the participants and the gender identity of the participants. This study predicts that people with learning disabilities will be rated more negatively than people without learning disabilities. Furthermore, it is predicted that Latin American and African American participants will rate people with learning disabilities more negatively than do European Americans. It is predicted that gender identity does not impact how individuals rate individuals with learning disabilities. Both hypotheses were confirmed.

Anne Mitzel, Early, Middle and Exceptional Education (BSE) | Poster | 2:35 p.m. - 3:50 p.m.  
STUDENT PERCEPTION OF TECHNOLOGY IN THE JUNIOR HIGH CLASSROOM

The primary focus of this study will be to observe the correlation between technology use and gender on achievement in a science classroom. This classroom can be defined as an applied science that is used to make a task easier in a certain way, for the purpose of the focus of this study we will focus on technology that involves computers and the classroom. It is its use that makes technology unique to this classroom. It is the classroom that uses technology in the classroom helps students understand material and causes them to be interested in the subject area.

The first goal is to determine if a certain gender benefits more from the use of technology than another gender. The results of this study could prove important to educators in the future to determine if the introduction of technology into the classroom is beneficial to students or not. This study will not only look at how various forms of technology enhances or diminishes a student’s educational interest, but it will observe how technology affects each gender differently. This study should determine if a certain gender learns faster from the use of technology than the other gender.

Ranyah Oden, Social Work (BA) | Presentation | 9:25 a.m. - 10:40 a.m.  
POLITICAL PARTICIPATION OF AFRICAN AMERICAN COLLEGE STUDENTS

The purpose of this research is to investigate the factors that impact political participation of African American, African Caribbean college students at a mid-sized, historically black university. Specifically, gender, political self-efficacy, political cynicism and trust in the media and attitudes toward the government. Shrivastava (1987) investigated the role of sociopolitical attitudes and civic education in the civic engagement of black youth, and political participation among university students. Findings showed civic engagement is positively related to knowledge of political systems, prosocial behavior, social responsibility, and future civic engagement, such as adult volunteerism and future voting behavior. Political participation is participation in which there is a change in the contribution of an individual to the goal of society. The author hypothesized African American female college students will be more politically participatory than African American male college students as measured by the Civic Engagement Scale, a significant positive correlation between political efficacy as measured by the Political Efficacy Scale, a significant positive correlation between trust in the media as measured by the Trust in Media scale and political participation as measured by the Civic Engagement Scale and a significant positive correlation between political participation and cynicism as measured by the Political Cynicism Scale and the Civic Engagement Scale. The results showed a significant positive correlation between political self-efficacy and political participation, a significant positive correlation between political participation and trust in the media and a significant positive correlation between participation and trust in the media. Strategies to increase African American political participation based on the results are presented.

Alyssa Oktela, Psychology (BA) | Poster | 12:05 p.m. - 1:10 p.m.  
PERFECTIONISM AND PERFORMANCE IN SCHOOL-AGE FEMALES COMPETITIVE DANCERS IN RELATION TO PARENTING CHARACTERISTICS

Research suggests that parents are highly involved in their children’s extracurricular activities. Because parents are so involved, their parenting style can have an effect on their child’s development of many characteristics, such as perfectionism. Perfectionism then may ultimately determine how a child performs in their activity or sport. The research is designed to determine if there is a relationship between perfectionism and specific parenting characteristics as well as performance in child and adolescent female competitive dancers. Female competitive dancers aged 8-18 completed questionnaires on perfectionism and perfectionism tendencies, parenting style, parental pressure, and core sport attitudes.

Lauren Stricker, Psychology (BA) | Poster | 12:05 p.m. - 1:10 p.m.  
FACTORS INFLUENCING UNDERREPRESENTED VS. OVERREPRESENTED STUDENT RETENTION AT MILLERSVILLE UNIVERSITY

Student retention is an important indication of an institution’s health. The alarm of declining retention and enrollment rates have prompted several school systems like PASSHE to abandon programs or merge campuses. While much research has been done on student retention it may provide a solid foundation to this phenomenon, most of the popular articles date back 40 years. The current study sought to understand the retention climate on Millersville University campuses as well as provide a specific retention model for Millersville University. Specifically, the purpose of the study was to determine whether a variety of factors relating to the institution and the student perceptions and attitudes, might predict an increased likelihood of student attrition at Millersville University from the first to second semester. Moreover, there was a specific focus on the differences in retention between overrepresented and underrepresented populations. The study focused on five sociopsychological factors: family intrusiveness, grit, utility of education beliefs, student-university fit, and university attachment. 400 freshman students attending Millersville University completed a survey co-validated the five scales. The poster session will highlight important literature relating to the study, the general methods of data collection and analysis and the findings of the study.

Anna VanBuskirk, Social Work (BA) | Poster | 2:35 p.m. - 3:50 p.m.  
BRIDGING THE GAP

Bridging the Gap is an event designed by Dr. Frank of the Social Work Department here at Millersville University. This is intended to bring together first year social work students and local in the community who are participants at the Factory Ministries and are experiencing poverty, thus “closing the gap” that socioeconomic status has opened. We cook dinner together, share a meal and have open dialogue structured by questions formulated by both students and participants. It is an eye-opening experience for all participants.

Agnes Willoughby and Lily Bauer, Early, Middle and Exceptional Education (BSE) | Presentation Panel | 2:35 p.m. - 3:50 p.m.  
FIGHTING THE GOOD FIGHT: ADVOCATING FOR STUDENTS WITH DISABILITIES

Advocating for students with special needs in the school community is an important role of the special education teacher. Negative attitudes and behaviors of typically developing peers toward their peers who have disabilities pose a challenge to positive school experiences. Even though there are legal mandates that protect the rights of individuals with disabilities (Americans with Disabilities Act of 1990) these rights cannot protect students from subtle bullying and discrimination from their peers.

Current research suggest that teachers and students may have a level of negative attitudes towards students with disabilities in schools. (Silio & Prater, 2015). These negative attitudes may result in bullying and added stress to the student with disabilities and parents. It is in this light that this discussion issue is round table, to advocate for students who have disabilities and their families, and also recommend some strategies that we might use as preschool teachers to promote cooperative interactions among students with disabilities and students without disabilities.

In this presentation format, we offer a few suggestions for advocacy on the following discussion topics.

1) Collaboration
2) Teacher empathy
3) Recognize biases
4) School policies
5) Cooperative learning
COLLEGE OF SCIENCE AND TECHNOLOGY

Marthelis Abreu, Applied Engineering, Safety and Technology (BS) | Poster | 1:10 p.m. - 2:25 p.m.
DETERMINING THE OPTIMAL TEMPERATURE FOR FOIL STAMPING ON SELECTED BOOK BINDING MATERIAL
The problem of this experiment was to create and standardize a procedure for foil stamping by determining the optimal heat and pressure needed for stamping foil onto a book binding cloth material. Metal foils are used to stamp embellishment onto book binding cloth materials made of different types of fabrics. Dictated by the amount of heat and pressure applied to the foil when stamping, the stamp may or may not adhere properly to the book binding cloth. This study was conducted to determine the optimal temperature and pressure for metallic foil stamping. In order to determine the optimal temperature, the foil was heated to the recommended temperature by the foil stamp manufacturer and other varying temperatures. Once the optimal temperature was determined, the optimal pressure was then determined. The optimal pressure was determined by heating the fillet to the optimal temperature and applying varying amounts of pressure. The pressure was measured using a scale in pounds.

Cassandra Alexander, MarieClaire Egbert, Nathan Murry, Earth Science (BS) | Poster | 9:25 a.m. - 10:40 a.m.
CROSS-FRONTAL EXCHANGE OF WATER MASSES AT THE NEW ENGLAND SHELF BREAK: PRELIMINARY OBSERVATIONS USING THE COASTAL PIONEER ARRAY
Intrusions of warmer, saltier continental shelf and Gulf Stream warm core ring (WCR) water onto the New England continental shelf have become more frequent during the last several years (Gawarkiewicz et al., 2018), and may in the future cause significant changes to the biological productivity and physical dynamics of the shelf. This study presents preliminary observations and analyses of a Gulf Stream WCR intrusion onto the shelf during the late spring and early summer of 2014 (first reported by Zhang & Gawarkiewicz, 2015) using the Pioneer Array. We focus on the temporal changes in physical and bio-optical properties at two fixed mooring positions on the outer shelf. The high degree of similarity in the salinity time series allow us to use cross correlation analysis as a means of estimating along-shelf current velocity.

Natalie Auman and Courtland Hess, Biology (BS) | Poster | 12:05 p.m. - 1:10 p.m.
DO SMALL MAMMALS PREY SWITCH DURING THE WINTER? AN EVALUATION OF INVERTEBRATE PREY AVAILABILITY IN THE SUBFOLIUM LEVEL OF THE FOREST FLOOR.
Many small mammals such as shrews and rodents prey on terrestrial invertebrates, but some also eat vertebrates such as other small mammals, frogs, snakes etc. Our objective will be to determine if small mammals become more attracted to the scent of vertebrate prey as invertebrate prey numbers decline during colder temperatures. Here we present the first year results of a multi-year study. Our two study sites occurred on the Millersville University Biological Preserve. Each study site contained a trap line consisting of paired Sherman small mammal traps (treatment and control) (n=32 traps at each site). Control traps had clean wood shavings while experimental traps had wood shavings soaked with mice urine (recent source of potential vertebrate prey). Traps were set and checked once a week from August 2017 until May 2018. Trapping success was recorded as the number small mammal captures recorded on each trap line divided by the total number of traps. This was done separately for control and treatment traps. To sample for invertebrate prey abundance, four 24cm2 of subfolium (leaf litter) and topsoil were collected along each trap line and the ambient, subfolium, and soil temperatures were recorded as well. Invertebrate samples were collected in cloth bags and transferred into Berloque funnels to determine invertebrate prey abundance. Data is still being collected and analyzed. We will use a general linearized model to determine if small mammal trapping success was influenced by invertebrate prey abundance, ambient temperature, subfolium temperature and topsoil temperature. We will also run interactions between invertebrate abundance and the different temperature readings. This study will provide a greater ecological understanding of potential prey switching strategies of small mammals during different seasons.

Sierra Baney and Miurey Lopez Jimeniz, Biology (BS) | Poster | 8 a.m. - 9:15 a.m.
STRUCTURAL DIFFERENCES IN THE LARGE PROTEIN TWITCHIN AFFECT THE REGULATION OF MUSCLE CONTRACTION IN SQUID
Muscles in the squid, Doryteuthis pealii, can extend further than muscles in vertebrate animals. Thompson et al. (2015) have demonstrated that the amount of force a muscle maintains as it stretches, referred to as the length-force relationship (LFR), differs significantly between squid muscle types. The mechanisms responsible for these differences are not understood, but it is likely that length-force relationships (LFRs) are regulated by large muscle proteins. Twitchin is known to play a role in controlling muscle activity in other organisms. The gene for twitchin was first identified in C. elegans by Benjam et al. (1993) when mutations within it resulted in muscle twitching. Butler and Seigman (2010) have suggested that twitchin may function by establishing connections between filaments in smooth muscles that enable the maintenance of force. Distinct forms (isoforms) of twitchin may enable muscles types to express divergent contractile properties. In mussels, Funabara et al. (2005) have shown that twitchin plays a role in the Ictachthi state, where muscle contraction is maintained using minimal energy. Our hypothesis, that squid muscles with distinct LFRs express different twitchin isoforms, was investigated by comparing sequences of RNA expressed by muscle fibers with distinct LFRs. Since RNA sequence determines the structure of proteins like twitchin, differential expression of twitchin RNA that correlates with LFR characteristics would support our hypothesis. Our results indicate that distinct isoforms of twitchin do exist in the squid funnel retractor and head retractor muscles and that alternative processing of RNA from the twitchin gene is responsible for these isoforms. This discovery provides insight into mechanisms regulating smooth muscle contraction.

Abigail Barnhart, Applied Engineering, Safety and Technology (BS) | Poster | 12:05 p.m. - 1:10 p.m.
DUCK FEEDERS AT MU POND
My poster will be describing the harmful effects that bread has on ducks. I will be talking about why it is considered ‘green’ to install duck feeders at the pond at Millersville University. I am looking into getting this project funded, and I would like to make it happen some time before I graduate.

Stephen Beegle, Physics (BS) | Poster | 12:05 p.m. - 1:10 p.m.
X-RAY PROPERTIES OF THE GALACTIC BLACK HOLE H1743-322
H1743-322 is an X-ray black hole binary system, located ~8.5 kiloparsecs (~27,000 light years) from Earth, near the galactic center of the Milky Way Galaxy. The system consists of a galactic black hole and a donor star, which orbit about a center of mass. The system spends much of its time in a period known as quiescence, which is a low X-ray luminosity state. Over time, the black hole in this system gathers material from the donor star into a region known as an accretion disk, where friction heats this matter up. Once a critical amount of matter has been gathered in the disk, and it has been sufficiently heated, there is an outburst. This outburst state is dominated by high luminosity X-ray emission, which is studied to determine attributes of the binary system through spectroscopy. The goal of this research project is to analyze the spectra from an outburst state of H1743-322 using two prominent observatories, Chandra X Ray Observatory, which is most effective in the 0.5-10.0 keV range, and Swift XRT, 0.2-15.0 keV. The comparison will not only allow for the analysis of the X-ray spectra, but also show how each observatory compares to the other during their observations.

Tobias Bentzel, Chemistry (BS) | Poster | 8 a.m. - 9:15 a.m.
EPoxidATION STUDIES OF INTERMEDIATES EN ROUTE TO ALTERSOLANOL DERIVATIVES
Altersolanol (A) has prompted multiple studies in our laboratory. Utilizing a Lewis acid-mediated cycloaddition, we previously prepared a Diels-Alder adduct containing the complete carbon framework of AP (80% yield, 81% regioselectivity). Based on these preliminary results, the feasibility of using a regioselective Diels-Alder reaction to produce a small library of adducts is being explored. Specifically, epoxidations and dihydroxylations of the adducts, based on the work of Krn et al., should provide altersolanol derivatives suitable for antibacterial testing.

Nicholas Bozelli, Applied Engineering, Safety and Technology (BS) | Presentation | 9:25 a.m. - 10:40 a.m.
ENACTING ACTIVE COMPLIANT VISUAL ROBOTIC CONTROL: SETUP, CONFIGURATION, AND APPLICATIONS
Industrial robotics play a vital role in automated systems, and sensory perception is critical to the advancement of this sophisticated technology. Vision systems combined with industrial robotics yield much more versatility and functionality increasing the usefulness of the industrial robot in manufacturing. The presentation will focus on the integration of a premier vision system with a typical industrial robotics configuration of the hardware and software will be discussed, along with some sample applications for enact active compliant visual robotic control.
A wide body of literature across numerous academic disciplines describes the difficulty people face when attempting to accurately predict future events as well as make judgements based on those predictions. Doing so requires a keen ability to formulate independent and unbiased statistical analyses that might be present. Decision making is of utmost importance throughout the weather enterprise. Thus, there is a foundational relationship between cognition, behavioral psychology, decision support services, risk management, and atmospheric science. This paper aims to inform the connection between social science and meteorology by determining if there is evidence of cognitive biases and heuristics in tornado warning response. Topics analyzed include the Gambler’s Fallacy and the Hot-Hand Fallacy in relation to how individuals responded to experimental tornados and unbiased statistics. We performed to explore the degree to which these fallacies were present. Ultimately, a discussion about this research’s significance to the weather enterprise, as well as society as a whole, will be addressed.

Robert Capella and Elizabeth Morehead, Earth Science (BS) | Poster | 12:05 p.m. - 1:10 p.m.
INVESTIGATING APPALACHIAN-INDUCED FINE-SCALE FRONTAL FEATURES DURING SEAR-MAR

Cold fronts, and their associated westward-northwesterly flow, in the central and south-eastern Pennsylvania region, are affected by the convoluted topography and clockwise curvature of the Appalachian Mountains. The purpose of this research is to investigate terrain-influenced fine-scale frontal features likely to propagate through the region during the Student Experience in Airborne Research in the Mid-Atlantic Region (SEAR-MAR) NSF educational deployment. These features, chosen based on climatological relevance to the target period of October through November, were simulated using the WRF (Weather Research and Forecasting) model. We qualitatively analyzed model output for terrain effects on temperature gradients, vertical motion, persistent and propagating waves, and wind direction and speed. The analysis revealed possible investigation targets to be explored by each King Air Aircraft, radiosondes, and surface-based observations. Based on the target areas, we developed experiments for climatologically probable synoptic events. Data collected during SEAR-MAR will be used to interrogate aforementioned features and model comparisons.

Delaney Costante, Ann Marie Rydberg, Maggie Hollingsworth, Jessica Evans, Tyler Treackle, Alexander Sandercock, Isabel Ritrovato, Matthias Leu, Courtney Check, Kayli Thomas, Biology (BS) | Presentation
1:10 p.m. - 2:25 p.m.
TEMPORAL ANALYSIS OF THREATS CAUSING SPECIES ENDANGERMENT IN THE U.S.

The U.S. Endangered Species Act (ESA) was created to protect and recover imperiled species and the ecosystems upon which they depend. Imperiled species are federally listed as either threatened or endangered (T&E). The objectives of our study were to quantify how the number of threats impacting species at time of their listing has changed, and to evaluate how the occurrence of a given threat included in a listing decision changed between 1975 and 2016. We accessed Federal Register listing documents for all T&E species listed in the U.S. and its territories from 1975 through 2016 to develop a database of threats impacting federally listed species. We defined six threat categories and recorded the presence/absence of a given threat category for a given species. Threat categories included habitat modification, overutilization, pollution, species-species interaction, demographic stochasticity, and environmental stochasticity. On average, number of threats per listing decision increased by 1.17 threats per decade. Compared to 1975, we found that the top threat occurrence in 2016 was no longer dominated by habitat modification, but also included environmental stochasticity and species-species interaction. We found a significant decrease in threat occurrence for overutilization since 1975 and for demographic stochasticity and pollution since the early 2000s. The increase in environmental stochasticity is mainly associated with the dynamics of climate change. Based on these trends, we provide recommendations on how to improve the recovery process for endangered species.

Delaney Costante, Biology (BS) | Presentation | 9:25 a.m. - 10:40 a.m.
BEHAVIORAL ASSAY TO DETERMINE SOUND SENSITIVITIES OF FUNDULUS HETEROCLITUS

Despite the potential for high sound conductivity in marine environments, little is known of the role of noise in the ocean, particularly in the lives of fishes. This study seeks to determine which sound frequencies may impact behavior in wild-caught mummichogs (Fundulus heteroclitus). The experiment took place in a round, soft-sided tank with water temperature set at 25°C. One subject or a group of four was placed into the experimental tank and allowed to acclimate for thirty minutes. Each test frequency (100-1100 Hz in 100 Hz increments), as well as controls of brown noise and no noise, was played for five seconds alternated with ten seconds of quiet, repeated over three minutes. The next frequency was randomly selected after a minimum of ten minutes in order to avoid habituation to the noises. The behavior of the fish was recorded during the trials using a video camera suspended above the experimental tank. These videos will be analyzed and behaviors transcribed with the following methods. Firstly, by using instantaneous sampling, the location of the subject in relation to the speaker will be recorded at 5 sec intervals. In addition, continuous sampling will be used to quantify the activity of the subject by recording the number of times an individual crosses a grid, which will be superimposed over the video. Findings from this study will elucidate the potential for noise pollution to impact the life history traits of these fishes and will provide a basis for future research on their use of sound.

Rachel Davies, Biology (BS) | Poster | 12:05 p.m. - 1:10 p.m.
MILLERSVILLE HAWKWATCH 2017

Hawkwatch sites occur throughout North America and involve national survey efforts to document and quantify Raptor Population Indices (RPI) for North American Birds of Prey (e.g., hawks, falcons, eagles, falcons, owls, and vultures). Hawkwatch sites have been around for decades and have provided valuable ecological data. For example, the hawkwatch site at Hawk Mountain Sanctuary (PA) documented the effects of pesticides on eastern North American raptor populations, showing that RPI data can serve as a bioindicator of environmental health throughout a geographic region. The goal of this project was to determine the feasibility of implementing a university student-run hawkwatch site. During the Fall 2017 migration season, in collaboration with Hawk Mountain Sanctuary, Millersville University student volunteers counted migrating raptors flying over campus. Students recorded RPI data using computer tablets and the Treittkland and Dunkardo migration count programs. Students determined the average hourly hawk count numbers at Millersville in comparison to Hawk Mountain and the Cape May Bird Observatory (NJ) to determine how geography impacts RPI results. After the Fall 2017 migration season, a Mood’s Median Test was used to compare RPI data between Millersville, Hawk Mountain and Cape May. Our findings showed that Cape May recorded higher RPI numbers which was attributed to the narrowing of the Cape May Peninsula along the Atlantic coast that served to concentrate raptors flying south along the Northeastern-Neotropical migration corridor. Further studies are planned to document how individual raptor species utilize the Atlantic Coast and Appalachian mountain range during migration.

Megan Davis, Biology (BS) | Poster | 9:25 a.m. - 10:40 a.m.
POTENTIAL FOR THE BIOACCUMULATION OF ENDOCRINE DISRUPTING CHEMICALS: AN ASSESSMENT OF WATER SEDIMENT AND AQUATIC INSECTS

Endocrine Disrupting Chemicals (EDCs) are compounds that mimic or antagonize hormones and thus have the potential to cause adverse effects on the development, growth, and reproduction of aquatic and terrestrial wildlife. One group of EDCs, polychlorinated biphenyls (PCBs), is of particular concern due to their widespread presence in the environment, low rate of degradation, and tendency to be stored in fatty tissues. We hypothesize that PCBs have the potential to bioaccumulate from the water and sediment of wetlands to aquatic insects to insectivorous birds. As a first step to test this hypothesis, we measured PCB levels in water, benthic sediment, and aquatic macroinvertebrates at five different Pennsylvania wetlands. Macroinvertebrates from six different sample types, and are currently being assayed for PCB levels using an enzyme-linked immunosorbent assay. Macrobenthic PCBs were extracted from different wetland samples and collected for long-term research sites for impending investigations. Data will be analyzed to determine whether variation in water and sediment PCB levels across sites predicts variation in aquatic insect PCB loads, a finding that would establish the potential for this EDC to bioaccumulate in insects and, ultimately, higher organisms such as insectivorous birds. The findings of my study also provide a basis for identifying long-term research sites for impeding investigations on how the bioaccumulation of PCBs may impact avian physiology, behavior, and fitness.

Aubrey Davis, Chemistry (BS) | Poster | 12:05 p.m. - 1:10 p.m.
IDENTIFYING PIGMENTS IN ART USING SERS AND SILVER NANOPARTICLES

This project is focused on using silver nanoparticles to characterize pigments and materials found in fine arts. Surface Enhanced Raman Spectroscopy (SERS) is used to build a spectral library of pigments and binders so that they may be more easily identified. SERS utilizes noble metal nanoparticles to enhance signals obtained by standard Raman Spectroscopy. This allows a much smaller sample size to be used for analysis, rendering SERS a virtually non-destructive method. There are many ways to identify pigments and binders, but spectroscopy is the only form of analysis that gives conservators and historians exact results. By creating a library of reference spectra, this work will aid in art conservation and the investigation of art forgeries.

David Deighan, Applied Engineering, Safety and Technology (BS) | Poster | 12:05 p.m. - 1:10 p.m.
DETERMINING THE DIFFERENCES IN DOT GAIN BETWEEN SELECTED OFFSET PLATES

Offset lithography is a widely-used method of commercial printing that involves a printing tank with water and pigment on top of it and water do not mix. Image areas of an offset plate are hydrophobic, and thus are able to carry oil-based ink, while non-image areas are hydrophilic and carry water-based press solution that keeps all ink in the image area during printing. Two different types of plates in offset lithography printing
are plates that have image areas created via laser ablation, and plates that have image areas created via chemical ablation. The problem of the experiment was to determine the differences in dot gain between print output of two different plates given the same image, same ink.

Mark Dandelie, Earth Science (BS) | Poster | 12:05 p.m. - 1:10 p.m.
COLD AIR DAMMING IN THE APPALACHIAN MOUNTAINS

The SEAR-MAR project that was run last November provided a wealth of data for Cold Air Damming. These one-of-a-kind data will be compared to WRF simulation data of the same event to determine how close the WRF is for Cold Air Damming. This research will similarly be applied to an early case study of Cold Air Damming that did not have SEAR-MAR data. Using upper air charts, the research will once again be compared to the WRF simulation. The final result will be comparing the two separate events, and demonstrating the unique data the SEAR-MAR acquired.

Willis D. Stephen, Applied Engineering, Safety and Technology (BS) | Poster | 1:10 p.m. - 2:25 p.m.
AN EXPERIMENTAL COMPARISON OF THE COLOR FASTNESS OF SELECTED WATER-BASED INKS

Water-based poster inks are commonly used in the packaging industry for printing graphics onto corrugated board. The inks are used throughout the industry and applied to different substrates. Samples of corrugated board with flexographic and screen-printed inks were exposed to environmental conditions. The experimental study measured the color fastness of water-based ink on 32ECT C-Flute kraft corrugated board. A densitometer was used to measure the color fastness of each sample. All samples were exposed to various controlled environmental conditions.

Quyen Do (BS), Holly Frantz (BA), Rebecca Grube (BA), Mathematics | Presentation
10:50 a.m. - 11:00 a.m.
AN OPEN TWO-COMPARTMENT MODEL AND THE EXPOSITIONAL PEELING METHOD FOR PARAMETER ESTIMATION

In physiology, a body can be seen as a system of two compartments. This project helps model the drug concentration in a body after being injected. This presentation is an introduction to the formulation, equilibrium finding, stability analysis, and the open two-compartment model. A substantial part is a focus on the Exponential Peeling Method used for estimating parameters of this drug model. Thus, given data on the concentration of drugs in two compartments at different times, using the Exponential Peeling Method, one can estimate the rate of drug transfer between two compartments and out of the system.

Quyen Do, Jamie Kunzmann, Josh Radack, Keri D'Angelo, Mathematics (BS) | Poster
9:25 a.m. - 10:40 a.m.
APPLYING KELLY CRITERION TO COLLEGE FOOTBALL BETTING

The Kelly criterion is a mechanism used for properly sizing a portion of one's capital for betting and investment purposes. In our research project, we explore a realistic application of the Kelly criterion. Our objective is to maximize a bettor's return while simultaneously minimizing the risk of ruin in the context of betting on FBS college football games. We build a selection of logistic regression models using scrapped college football data of the 2008-2016 seasons. Simultaneously comparing our models to the well-known PFR model designed by pro-football-reference.com. We then apply the predicted probabilities to our expansion of Kelly criterion to more than one betting event. Simulations are then run with varying approaches differing number of bets, game filtering methods, and fractional Kelly sizes are all considered to come up with the most profitable betting strategy for an FBS season.

Brooke Dobbs, Mathematics (BS) | Poster | 12:05 p.m. - 1:10 p.m.
WOMEN AUTHORS IN TEXTBOOKS IN MATHEMATICS

It appears that the majority of mathematicians who write textbooks for mathematics are men. The author investigates this situation by compiling a list of recent women authors of mathematics textbooks and the type of textbooks they have written. This data is compared by a brief history of women in mathematics. It is also compared to the number of mathematics textbooks. The author then presents her conclusions regarding the state of women authors of textbooks in mathematics.

Moira Dougherty, Biology (BS) | Poster | 12:05 p.m. - 1:10 p.m.
CHARACTERIZATION OF PREMIGRATORY NCCS IN BETWEEN THE TWO WAVES OF MIGRATION IN SLIDER TURTLE (TRACHEMYS SCRIPTA)

The bones of the ventral turtle shell (the plastron) develop similarly to facial bones, suggesting they are produced by the same type of cells, a migrating cell population known as neural crest cells (NCCs). In most embryos, NCCs migrate away from the developing central nervous system over a very short period. There is a unique second migration of NCCs out of the developing spinal cord of turtle embryos; these migrate ventrally and contribute to the bones of the plastron. The hypothesis being tested is that these late-emerging cells result from dormant premigratory NCCs that are not depleted at the end of first wave of migration. The lack of depletion could be due to the inability of the experiment to create from the neural tube the goal of this project is to determine whether a neural crest cell markers are expressed in premigratory NCCs during this dormant period using immunofluorescence. Specifiers are transcription factors that control gene regulatory networks important for cell differentiation. This set of genes has been shown to be required for premigratory NCCs to emigrate, and the lack of expression of one or more of these specifiers could be preventing them from exiting the neural tube.

This explanation would further our understanding of the role of this unique population of trunk NCCs in the development of the turtle shell.

Liz Dulan, Mathias Ziemke, Mathematics (BS) | Presentation | 1:10 p.m. - 2:25 p.m.
DRUG ASSIMILATION INTO THE BLOOD USING DYNAMIC SYSTEMS

We investigate the metabolism of drugs in the body through two models of interactions with the bloodstream: the digestion of drugs in the gastrointestinal tract to the bloodstream considering both discrete, and continuous drug intake models, and the absorption of drugs from the bloodstream to the brain. In both models we simplify the body to two compartments: an organ (the gastrointestinal tract) or the brain, and the bloodstream. Viewing this model with dynamic systems and partial differential equations, we are able to derive equations to represent the assimilation of pharmaceuticals into the bloodstream.

Sandon Eaton, Earth Science (BSE) | Poster | 10:50 a.m. - 12:05 p.m.
MINERAPOLY - GAMIFY THE CLASSROOM

Minerals and ore deposits have formed in a variety of environments, ranging from modern hydrothermal deposits to ancient banded iron formations that formed billions of years ago in earth's oxygen poor atmosphere. For any ore deposit, specific chemical and physical conditions must be present. Society uses these minerals for cooking materials, bridges, walls, fertilizers, and even makeup. Because minerals are so important to society, it is important that undergraduate earth science students learn about mineral properties, the environment in which the deposits can be found, how mineral deposits are discovered, and how humans utilize minerals to produce various products. Despite its importance, learning about minerals and their various properties can be difficult and tedious for students. Moreover, many students are not exposed to geology prior to entering higher education. Earth science is often disregarded and not included in the science curriculum. The goal of this project was to create a learning activity that intrigues students and opens up a discussion of the importance of earth materials and their impacts on everyday lives. This game is designed to have a reasonable degree of difficulty, so it can be used for elementary level to university courses. Importantly, this activity provides a connection between everyday life objects and minerals. While discovering how various minerals are used, students compete to find the best ore deposits and learn about the properties of minerals.

MU Programming Teams with Todd Eckordier | Group Poster | 10:50 a.m. - 12:05 p.m.
2017-18 ACCOMPLISHMENTS OF THE COMPUTER SCIENCE PROGRAMMING TEAMS

This poster will recap the 2017 - 2018 academic achievements of the Computer Science Programming Teams. Accomplishments will include descriptions of activities they participated in, professional development, and competitions. Students will be manning the posters throughout the day to answer any questions you have.

Presenters' names are: Dan Harrystein, Henry Schmale, Connor Billings, Alayna Woleslagl, Ryan Petersen, Hugh Quinn, John Fazio, Nick Russell, and Jessica Hildebrandt.

MU Cyber Defense Organization with Todd Eckordier | Group Poster | 10:50 a.m. - 12:05 p.m.
ACCOMPLISHMENTS OF THE MU CYBER DEFENSE ORGANIZATION

This poster will recap the 2017 - 2018 academic achievements of the Millersville University Cyber Defense Organization. It will also provide content and descriptions of activities they participated in, professional development, and competitions. Students will be manning the posters throughout the day to answer any questions you have.

Presenters' names are: Grant Harrystein, Zack Groff, Matt Fosssett, Joe Dunton, Zack Misa, Jimmy Roche, and Meireg Ayanto.

C. Carter Farmer, Biology (BS) | Presentation | 9:25 a.m. - 10:40 a.m.
CITIZEN SCIENCE: ACOUTIC SURVEY OF LOCAL BAT SPECIES OF CONCERN

Populations of little brown bats (Myotis lucifugus), Northern long-eared bats (Myotis septentrionalis), and Indiana bats (Myotis sodalis) have declined dramatically in PA due to disease; protection of these remnant bat colonies is of high conservation priority throughout North America. A preliminary acoustic survey was conducted fall 2017 for bat species within Lancaster County Conservancy (LCC) preserves using the Echo Meter Touch 2 PRO with auto-identification of species through its Kaledoscope software. The LCC preserves surveyed were identified as near current or anticipated construction that could potentially disturb roosting bats: Climber's Run, Kelly's Run, Steinman Run, Trout Run, and Tualpa Glen. Recordings were analyzed by call beats per hour and per preserve. Initial potential presence was revealed for the little brown, Northern long-eared, and Indiana bats at Kelly's Run; Indiana bats at Trout Run, and little brown bats at Steinman Run.
Such as extended drought or prolonged heavy rain will impact the increased number of dry days may negatively impact crop yields. Interestingly, climate change may be both favorable and unfavorable. The projected and potential occurrences of extreme weather events MIROC3.2 disruptions are projected to increase further through 2050. Disruptions to agricultural production due to climate change have Mary Gilbert, Earth Science (BS) | Poster | 1:10 p.m. - 2:25 p.m.

The main focus of this research project is to observe the effects of conforamional torsion on the absorption properties of synthesized yellow dye molecules to better design and create organic dyes with new and improved properties to potentially be used in biomedical imaging applications. By increasing ring size, we expect the absorption of the dye as well as the electronic properties of the yellow chromophore to dramatically change due to the conformational constraints of the fused-bicyclic system.

Brandon Frey, Chemistry (BS) | Poster | 9:25 a.m. - 10:40 a.m.

STUDIES EN ROUTE TO ALTERSOLANOL DERIVATIVES

Altersolaran P (AP), a new member of the altersolaran family of compounds, is the inspiration for multiple synthetic studies in our laboratory. AP exhibits broad-spectrum activity against gram-positive bacteria and some gram-negative bacteria. Previously in our laboratory, a synthetic intermediate, containing the complete carbon framework of AP has been synthesized via Lewis acid-mediated Diels-Alder cycloaddition on gram scale (80% yield and 81 regioselectivity). Using classic 2D NMR techniques, the regioselective nature of the Diels-Alder reaction was proven. Current synthetic efforts are focused on dihydroxylation of the Diels-Alder adduct model system. Our long-term goal is to synthesize AP, and structurally related derivatives, as efficiently as possible. Then, the biological activities of AP, and related compounds, can be further studied.

Shelby Fuller, Earth Science (BS) | Presentation | 9:25 a.m. - 10:40 a.m.

FACTORS AFFECTING STREAMFLOW TIMING ON SAGEHEN CREEK

Over the past 60 years, the peak streamflow of Sagehen Creek has been occurring earlier and earlier in the year. Sagehen Creek, located in the Sierra Nevada Mountain Range in California, is largely influenced by winter snowpack that falls in the mountains. Once the snowpack begins to melt, a large amount of runoff ends up in Sagehen Creek, contributing to its streamflow. However, peak streamflow, which is usually the result of having a large amount of snowpack melt, has been happening earlier in the year than what is considered normal. Factors affecting wintertime snowpack directly relate to the timing of streamflow. Temperature, snow water equivalent and snowpack depth are factors that are considered that affect snowpack and will ultimately affect the streamflow of Sagehen Creek. Research on this is important because much of California relies on this snowmelt and streamflow as an important water resource during the summer months when there is little precipitation.

Mallik Gilbert, Earth Science (BS) | Poster | 1:10 p.m. - 2:25 p.m.

THE IMPACT OF EXTREME WEATHER EVENTS DUE TO CLIMATE CHANGE ON LANCASTER COUNTY AGRICULTURAL PRODUCTION IN THE PERIOD 1980-2016

Disruptions to agricultural production due to climate change have increased in the past forty years and according to several Global Climate Models (GCMs) including, but not limited to, ECHAM5 and MIROC2.3 disruptions are projected to increase further through 2050. The projected and potential occurrences of extreme weather events due to climate change will impact agricultural productivity globally. Interestingly, climate change may be both favorable and unfavorable to agriculture. For example, warmer temperatures during the growing season and may possibly impact crop yields, while an increased number of dry days may negatively impact crop yields. Furthermore, warmer temperatures and extreme precipitation events such as extended drought or prolonged heavy rain will impact the quality of the soil in which crops are grown, as well as the overall crop yield.

Christa Gonzalez, Chemistry (BS) | Poster | 2:35 p.m. - 3:50 p.m.

DETECTION OF LEAD IN DRINKING WATER USING MODIFIED GOLD NANOPARTICLES AND ULTRAVIOLET-VISIBLE SPECTROSCOPY

Heavy metals, such as lead are found at hazardous levels in water sources across the world. Lead finds its way into water sources from old pipes, paints, gasoline, and other consumer products. When lead enters the body, it causes brain and nervous system damage, and in extreme cases, can be fatal. Lead contamination in drinking water is prevalent around the world, with millions of people being exposed to toxic levels every day. This project will use ultraviolet-visible spectroscopy in combination with modified gold nanoparticles as a simple, quick method to detect low levels of lead in water.

Gillian Good and Weihao Ma, Chemistry (BS) | Poster | 12:05 p.m. - 1:10 p.m.

EXPLORING THE REGIONSELECTIVE DIELS-ALDER REACTION SCOPE OF 1,4-NAPHTHOQUINONES

Altersolaran P (AP), a new member of the altersolaran family of compounds, is the inspiration for multiple synthetic studies in our laboratory. The altersolaran family, and structurally similar compounds exhibit antibacterial activity. Recently, we reported our work toward the regionselective synthesis of intermediates en route to altersolaran derivatives via Lewis acid catalyzed Diels-Alder reactions of the natural products isoprene and Jugoine (3-hydroxy - 1,4-naphtalenediols).

Jennifer Houitz, Biology (BS) | Poster | 8 a.m. - 9:15 a.m.

POSTMORTEM SUCCESSION OF THE EUROPEAN STARLING (STURNA VULGARIS)

GASTROINTESTINAL MICROBIOLOGY

Gastrointestinal microbiota impact vertebrate host health through multiple roles in immunity, nutrition, and waste removal. Although several studies have demonstrated an importance for the functional role gut microbes play in living organisms, the fate of the gut microbiome after death is less understood. Postmortem succession has been characterized in human-associated microbial communities, but no studies have investigated this phenomenon in birds. Here, we examined the postmortem microbiome dynamics of the gastrointestinal tracts of European starlings (Sturnus vulgaris). The primary objectives of this study were: 1) to characterize the gastrointestinal microbiome in antemortem and postmortem starlings, 2) to compare microbial composition among different gastrointestinal tract regions and 3) to determine how the gastrointestinal tract microbiome changes during decomposition. To date, we have characterized shifts in the gastrointestinal microbiome of starling nestlings at 0, 24, 48, and 72 hours postmortem. Immediately prior to death, the microbiome was diverse and comprised of microbes from multiple phyla of variable relative abundance. Interestingly, the relative abundance of each phyla varied across regions of the gastrointestinal tract. For example, the small intestine, ceca, and cloaca were dominated by Proteobacteria, whereas the large intestine was dominated by Tenericutes. After 72 hours of decomposition, the microbiota in the microbial communities diminished in all gastrointestinal tract regions to only include Proteobacteria and Firmicutes. We conclude that the microbiome of the gastrointestinal tract in living starlings is variable and abundant, but that it changes drastically, both naturally and possibly due to the absence of microbial prey. To our knowledge, these findings are the first to describe the necrobiole community in an avian model.

Erin Jones, Earth Science (BS) | Poster | 9:25 a.m. - 10:40 a.m.

STATISTICAL COMPARISON AND SIMULATIONS OF SUPERCELLS IN ENVIRONMENTS WITH VARYING SIGNIFICANT TORNADO PARAMETERS

A Rapid Update Cycle 2 (RUC-2) dataset of proximity soundings from non tornadic and tornadic supercells was categorized based upon the following significant tornado parameter (STP) thresholds: STPs greater than 1, 2, 3, and 4, as well as STPs between 1 and 10, and between 5 and 10. Though in a forecasting setting STPs greater than 1 were more effective at distinguishing between storm type. It was found that the self-organizing map (SOM) statistical clustering technique to vertical profiles of four variables, temperature, dewpoint, and ground relative u and v wind components, for each STP threshold. These SOMs were compared to others with only u and v wind components considered. Additionally, SOMs which were created after the data had been normalized by variable and height were compared to SOMs with unaltered data to determine if either was more effective at distinguishing between storm type. It was found that the wind-only and non-normalized SOMs slightly outperformed their counterparts. Composite near-storm environments from each node of the best performing SOM with the STP threshold between 1 and 10 were then used as the base-states for a set of idealized numerical simulations of supercells to ascertain the extent to which characteristics of the resulting storms (e.g., updraft strength, near-ground vertical vorticity) resembled the primary storm type (tornadic or nontornadic) associated with each node.

Christopher Legerton, Physics (BS) | Poster | 12:05 p.m. - 1:10 p.m.

DARK MATTER IN GALAXY CLUSTER ABBEL 1853

We have known about dark matter since 1937, thanks to Fritz Zwicky. However, just because we know of its existence, does not mean it serves as protocol for other citizen science bat survey programs across the country and worldwide.
The problem of this study was to determine the optimal mixing ratio of epoxy ink and appropriate ink catalyst. Specifically, the study tested N24-DAR Epoxy Ink. The purpose of this study was to provide detailed information concerning the ratio relationship between epoxy and its catalysis in order to set a standard for the optimal curing. These inks are usually used for industrial applications such as printed circuit boards, electronic equipment panels, automotive, aeronautical, and medical components.

The ventral part of the turtle shell (the plastron) comprises several bony plates formed by intramembranous ossification, the same process that produces many of the bones of the skull. Several anterior skull bones and facial structures are produced by a population of migratory, multipotent cells originating from the developing central nervous system, known as neural crest cells (NCCs). Previous research has demonstrated that trunk NCCs, arising from the developing spinal cord instead of the brain, migrate in two distinct waves in turtle embryos. This experiment tested the hypothesis that the second wave of trunk NCCs in turtle embryos is capable of differentiating into bone.

Electroreception is a unique sensory modality found in many fishes, particularly the Chondrichthyan fishes (sharks, skates, rays, and cartilaginous fish). Among Chondrichthyes, the cartilaginous fishes, particularly the Chondrichthyan fishes (sharks, skates, rays and cartilaginous fish), are characterized by robust electroreceptive abilities. It has been suggested that the pits and pores covering the head, snout, and paws are all ampullae of Lorenzini; however, the presence of these electroreceptors in this group of fishes is relatively unstudied. It has been assumed that the pits and pores covering the head, snout, and paws are all ampullae of Lorenzini; however, the presence of these electroreceptors in this group of fishes is relatively unstudied. It has been assumed that these electroreceptors exist in the same species.

The problem of this study was to experimentally compare the results of three different color models during the heat transfer process. Specifically, the study compared the Cyan, Magenta, Yellow, and Black color model (CMYK), the Red, Green, and Blue color model (RGB), and the three-dimensional color model (CIE LAB). All samples used in the study were produced and measured on white, 100% cotton t-shirts. The color of each color model was measured using an X-rite spectrophotometer.

The study experimentally compared the color fastness of a screen printed test image using industry grade water based textile inks. Specifically, the study compared Nazdar and Speedball brands of textile based screen printing inks. Using a controlled test target, all samples used in the study were printed on white 100% cotton t-shirts. The study measured the color density of the test image through the image data cycles. A spectrophotometer was used to measure all samples.
Katelyn Newcamp, Biology (BS) | Poster | 10:50 a.m. - 12:05 p.m.
ANALYSIS OF INTERNAL PARASITES BETWEEN NATIVE AND CAPTIVE WHITE-TAILED DEER IN LANCASTER COUNTY, PENNSYLVANIA

Dissection of deer in the fall of 2017 showed that the indigenous population of deer in Lancaster County, Pennsylvania, was more susceptible to internal parasites compared to the captive population. This discrepancy could be attributed to differences in habitat, diet, and stress levels. The study also highlighted the importance of monitoring parasite loads in both populations to prevent potential ecological impacts.

Carolyn Nowak and Lauren Ostopec, Chemistry (BA) | Poster | 9:25 a.m. - 10:40 a.m.
SYNTHESIS AND REACTIVITY OF A VARIETY OF 1-AROYLDIAZIRIDINE DERIVATIVES

Diaziridines are three-membered rings with two nitrogen atoms and one carbon atom. These rings may possibly give rise to novel pharmaceuticals via the less explored pathway of N-N bond cleavage of the three-membered diazirine ring. The anticipated compounds are 1,3,4-oxidazolines and/or Amidines achieved by treatment with method and light microscopy. The hypothesis was that there would be a positive correlation between the types of parasites found in the wild and wild deer populations in each area, because of similar environmental factors and transmission through potential direct and indirect interactions. The results of this research will directly aid farmers and veterinarians in improving herd health and in mitigating disease.

Carli Parenti, Grace Smoot, Olivia Rosensteel, Delaney Costante, Biology (BS) | Poster | 8 a.m. - 9:15 a.m.
DOCUMENTING SUCCESS: RECOVERY OF SPECIES FROM THE ENDANGERED SPECIES ACT

In 2017, the current presidential administration proposed and implemented a number of changes in federal environmental policy, including proposed changes to the Endangered Species Act (ESA). These changes reflect a major goal of the current administration; to expedite future recovery potential, provide economic incentives to possess electron- trapping characteristics in a 3-dimensional linkages. The structure is geometrically and energetically designed to possess electron trapping characteristics in a 3-dimensional organic framework because the anthryl units will be arrested in an orthogonal orientation. We will accomplish the bulk of our synthesis and characterizations by performing advanced characterization studies in the form of Differential Scanning Calorimetry (DSC), IR Spectroscopy, and UV-VIS Visible Spectroscopy at Millersville University. We will also carry out Powder X-Ray Diffraction (PXRD), Thermal Analysis, and Gas Adsorption Analysis with our collaborators at James Madison University.

George Pearson, Chemistry (BS) | Poster | 9:25 a.m. - 10:40 a.m.
SYNTHESIS OF AN OPTOELECTRONIC COVALENT ORGANIC FRAMEWORK FROM ANTHRONE

Covalent organic frameworks (COF) are porous 2- or 3-dimensional polymer structures designed using only organic elements (C, O, N, B) that are constructed of the same repeating covalent bonding. They are used for gas storage, catalysts, chemical sensing, biomolecule capture, and optoelectronics. Our goal is construction of a COF from anthrone by nitrilation, oxidation to the anthraquinone, reductive coupling to form the tetranitridated biaxidyl derivative, and reduction of the tetrani trated compound to a tetraamin compound. This symmetric tetraamin compound will be condensed with 1,4-dibenzaldehyde to generate a new COF, constructed of imine linkages. The structure is geometrically and energetically designed to possess electron trapping characteristics in a 3-dimensional organic framework because the anthryl units will be arrested in an orthogonal orientation. We will accomplish the bulk of our synthesis and characterizations by performing advanced characterization studies in the form of Differential Scanning Calorimetry (DSC), IR Spectroscopy, and UV-VIS Visible Spectroscopy at Millersville University. We will also carry out Powder X-Ray Diffraction (PXRD), Thermal Analysis, and Gas Adsorption Analysis with our collaborators at James Madison University.

Katelyn Newcamp, Biology (BS) | Poster | 10:50 a.m. - 12:05 p.m.
DETERMINING THE OPTIMAL RATIO OF AN EXTENDER BASE ADDITIVE TO WHITE TEXTILE SCREEN PRINTING INK

The study tested and evaluated various ratios of an extender base additive to white textile screen printing ink in order to produce consistent screen printing results. The mixtures were subjected to various curing times. All ratio samples were flex on black 100% cotton 1-shirts using an identical, controlled screen printing method, curing temperature, wash and dry cycle, and pull test. The problem of this study was to develop the optimal ratio of PolyOne Cure Bright White textile screen printing ink. The study tested and evaluated various ratios of an extender base additive to white textile screen printing ink in order to produce consistent screen printing results. The mixtures were subjected to various curing times. All ratio samples were flex on black 100% cotton 1-shirts using an identical, controlled screen printing method, curing temperature, wash and dry cycle, and pull test.
Dr. Kathleen Schreiber, Geography | Poster | 9:25 a.m. - 10:40 a.m.
AN ASSESSMENT OF MILLERSVILLE UNIVERSITY STUDENT AWARENESS OF AND ATTITUDES TOWARDS CAMPUS SUSTAINABILITY

The January 2016 Millersville University Climate Action Plan calls for advancement of campus climate literacy, a culture of sustainability, and campus activities in support of sustainability education. At the 2-year anniversary of the campus commitment, students in the geography course, Sustainable Development, assess campus learning, awareness, and attitudes related to campus sustainability, climate change, commuting, and recycling. Statistical tests were performed to assess differences in student sustainability learning and attitudes during the progression from freshman to senior years and also across majors. The results will be used to guide MU Sustainability Office in furthering campus sustainability education efforts.

Presenters’ names are: Kelsie Baxter, Arynna Cooper, Gabby Kuster, Angel Pagán, Jason Reuter, Sabrina Rowe, Alex Witte and Nicole Witte.

Dr. Kathleen Schreiber, Geography | Poster | 9:25 a.m. - 10:40 a.m.
DETECTION OF HEAVY METALS USING METAL NANOPARTICLES

increased order will cause the mechanical properties of the polymer to increase and produce a strong biodegradable polymer that can be used in place of commonly used plastics, but which possesses a smaller environmental footprint.

Petroleum-based, non-biodegradable plastics, such as LDPE, HDPE, and PETE, are used in storage containers, chairs, water bottles, grocery bags, fuel tanks, car parts, prosthetics and many other applications. They are ideal because they are stable, chemically inert, and strong. However, non-biodegradable plastics are bad for the environment because, on average, it takes between 10 to 450 years for decompositional formulas to be broken down due to their durable properties. Due to their durable properties, they can absorb, concentrate, and transport pollutants in the environment, threatening the natural flora and fauna. Biodegradable plastics are a growing field of interest as a means to replace these petroleum-based plastics. Polyhydroxyalkanates (PHA) integrate oxygen into the polymer hydrocarbon backbone, which allows it to biodegrade.

Liam Schroeder and Frances Wenrich, Chemistry (BS) | Poster | 2:35 p.m. - 3:50 p.m.
IMPROVING THE MECHANICAL PROPERTIES OF POLY-VALEROLACTONE THROUGH ARYL RING STACKING AND HYDROGEN BONDING INTERACTIONS

When exposed to three notable bacterial strains; Bacillus sp. IBP-V002, Enterobacter cloaceae sp. IBP-V001, and Gramicidibacillus sp. IBP-V003. The problem with PHA is that they possess weak intermolecular forces, which leads to a brittle plastic. The integration of oxygen into the polymer backbone renders them vulnerable to certain enzymes for the modification of β-Valerolactone, by α-substitution with ary rings, will produce a monomer that will impart more ordered structure to the polymer sample. This increased order will cause the mechanical properties of the polymer to increase and produce a strong biodegradable polymer that can be used in place of commonly used plastics, but which possesses a smaller environmental footprint.

Andrew Sellers and Rebecca Ringeisen, Applied Engineering, Safety and Technology (BS) | Poster | 8 a.m. - 9:15 a.m.
ENVIRONMENTAL SOUND LEVEL MEASUREMENTS

The purpose of this experiment is to measure the sound levels of different environments around Millersville University. We plan to test sound levels in different laboratories, as well as buildings around campus. The results will determine if any areas on campus buildings measure above 85 dBa, the action level required by OSHA. These tests will help us locate areas where employees and students may have potential exposure to harmful noise to exposure to noise levels above standards, which may cause noise induced hearing loss and other possible adverse health effects. By locating areas where the noise levels are over 85 dBA, we will provide recommendations to control noise exposure to protect the affected population.

Johan Serrano, Chemistry (BS) | Poster | 1:10 p.m. - 2:25 p.m.
DETECTION OF HEAVY METALS USING METAL NANOPARTICLES

Metal nanoparticles play an important role in science due to the unique properties they demonstrate, therefore a lot of research has been reported for the synthesis and applications of metal nanoparticles of different size and shape. In this research, spherical gold or silver nanoparticles will be synthesized and characterized by UV-Visible Absorption Spectroscopy and Transmission Electron Microscopy (TEM). The goal of this research is use metal nanoparticles in order to detect the concentration of different heavy metals at low concentration and with high selectivity.

Marie Stolztfus, Biology (BS) | Poster | 12:05 p.m. - 1:10 p.m.
IDENTIFICATION OF TISSUE-SPECIFIC ISOFORMS OF THE LARGE ELASTIC PROTEIN KETTIN IN SQUID MUSCLES EXHIBITING DIVERSE CONTRACTILE PROPERTIES

In the longfin inshore squid, Doryteuthis pealeii, different muscle types have evolved to maintain maximum force over distinct ranges of length. Variations in length-force relationship (LFR) are correlated with distinctions in muscle ultrastucture. Muscles in the squid’s funnel retractor, head retractor, nuchal retractor, arm, arm-keel, and mantle have been found to exhibit different LFRs, but the molecular mechanisms responsible for these differences are not understood. In some species, diverse forms (isofoms) of myosin play a role in regulating muscle contraction, but myosin isofoms do not appear to be involved in controlling LFR’s in squid. Kettin is a large muscle protein found in some invertebrates that is known to regulate the structure of sarcomeres, which are the basic units for muscle contraction. Our research has identified kettin-like RNA sequences in the head and funnel retractors of squid. It is possible that differential expression of kettin isoforms may contribute to the differences in the LFRs observed for these muscles. To test this hypothesis, I compared RNA sequences expressed in the six muscle types listed above using RNA-Seq. A correlation between the abundance of a particular kettin isoform, or sequences for another protein, and specific LFR properties would suggest a role for that muscle protein in the regulation of contraction. This research will contribute to our understanding of the mechanisms of invertebrate muscle regulation and evolution.

Natalie Sukanick, Chemistry (BS) | Poster | 8 a.m. - 9:15 a.m.
COVALENT ORGANIC FRAMEWORK

Bonding organic molecular building blocks by strong covalent bonds, such as imine linkages, to make crystals of 2- and 3-D extended structures, produces several new classes of porous materials called covalent organic frameworks (COF). The construction of porous COFs has gained much attention due to the infinite applications for these species. COF possess low density, large surface area, and tunable pore size and structure. These features play a key role in maximizing the use of COFs for gas trapping, storing, and adsorption ability. This project seeks to explore the synthesis of new classes of porous materials called covalent organic frameworks (COFs). COF can be tested for absorbance and emission properties. Another method to monitor the results is through powder x-ray diffraction in collaboration with James Madison University, which provides data on structural regularity of the COF. The goal is to produce regular, working structures to make an effective solar cell resulting in high yields of photons.

Abdullah Syed and Frances Wenrich, Chemistry (BS) | Poster | 9:25 a.m. - 10:40 a.m.
SYNTHESIS OF HIGHLY EMMISSIVE COVALENT ORGANIC FRAMEWORKS

We will focus on creating a highly emissive covalent organic framework (COF). Due to their ability to absorb light, which makes them effectively mimic solar cells, these COF are valuable tools for organic solar cell applications. We will be creating the proposed COF by using boronic esters to interconnect bifluorenes by phenyl linkers. By using UV-vis and fluorescence spectroscopy, the sample of COF can be tested for absorption and emission properties. Another method to monitor the results is through powder x-ray diffraction in collaboration with James Madison University, which provides data on structural regularity of the COF. The goal is to produce regular, working structures to make an effective solar cell resulting in high yields of photons.
Inkjet printing is a type of computer printing used to recreate digital images by propelling droplets of ink onto the substrate. This printing process is more complex than methods used in printers as they are small and expensive compared to professional printers. For the purpose of this research, selected inkjet photo quality paper were experimentally compared to determine which photo paper produces a higher color saturation. Research was conducted by printing predetermined test images and text onto an industry-standard inkjet photo quality paper, and onto a generic inkjet photo quality paper. All samples were produced using the same inkjet printer and ink. All sample prints were measured with an X-rite spectrophotometer.

This study looks at correlations between lightning occurrence and observed weather parameters for Lancaster County, Pennsylvania. The lightning data are from the National Lightning Detection Network (NLDN) and the North American Precision Lightning Network (NAPLN).

PARALLEL PATHFINDING
Pathfinding is an important problem that is used in many applications ranging from video games to robotics. However, finding the best path between two points can often take a very long time. So, the goal of this research was to look for ways to increase performance by utilizing multiple processors. During the research project, several algorithms were run and analyzed inside of randomly generated 2D grid-based environments and then compared based on factors like execution time and path quality. Several of these algorithms use parallel processing to increase speed, including a scalable algorithm that splits the search space evenly. In addition, this research investigated how varying tile costs in the grid environment affected the performance and path quality of these algorithms.

In the context of autonomous vehicles, Pathfinding is an important problem that is used in many applications ranging from video games to robotics. However, finding the best path between two points can often take a very long time. So, the goal of this research was to look for ways to increase performance by utilizing multiple processors. During the research project, several algorithms were run and analyzed inside of randomly generated 2D grid-based environments and then compared based on factors like execution time and path quality. Several of these algorithms use parallel processing to increase speed, including a scalable algorithm that splits the search space evenly. In addition, this research investigated how varying tile costs in the grid environment affected the performance and path quality of these algorithms.

The lightning data are from the National Lightning Detection Network (NLDN) and the North American Precision Lightning Network (NAPLN).
that involves working with KPETS to have their trained therapy dogs.

Erica Lehman, Nursing (MSN)  |  Poster  |  10:50 a.m. - 1:20 p.m.

**ACNE VULGARIS AND ADULT WOMEN TREATED WITH ORAL CONTRACEPTIVE PILLS**

Acne vulgaris (acne) is often associated with the adolescent years of life, but adult acne has increasingly become the reason for many patients to seek a dermatological evaluation. Adult women are more likely to suffer from acne than adult men. Oral contraceptive pills (OCPs) are the preferred type of OCPs to treat acne. Within this integrative review, the effectiveness of OCPs in treating acne in adult women was examined. The data was analyzed in three groups: Formulary Focused Studies, Comparative Studies, and Combined Therapy Studies. After analyzing the data it was concluded that by cycle six, OCPs reduced acne lesions. Disaccharides in the definition of acne, lack of skin care control, and inadequate representation of multiple races in subject selection affected the generalizability of the studies results. Contraindications to OCPs therapy was not consistently assessed. Many of the studies included within this integrative review were not only outdated, but also did not recommend a superior formulation of OCPs that treated acne, thus supporting the need for future research studies.

Shane Marino, History (MA)  |  Presentation  |  3:30 p.m. - 4 p.m.

**IMPERIAL CAMELOT: JOHN F. KENNEDY AND THE ADVISORY EFFORT FOR REGIME CHANGE IN THE REPUBLIC OF VIETNAM, 1962-1963**

This project will examine United States influence of the 1963 overthrow and assassinations of Ngo Dinh Diem and Ngo Dinh Nhu. The most intense analysis will focus on the advice provided to Kennedy from April-November 1963 and interpret how the the president’s advisors shaped American influence of regime change in South Vietnam. Finally, it will offer tentative conclusions regarding how Kennedy’s transformation of Vietnam intervention set the course for subsequent American actions in South Vietnam, thereby fixing the Kennedy era within the protracted history of U.S.-Vietnam relations. The oral presentation will present a condensed overview of my master’s thesis, for which this research is being conducted with funding from a SGRCA award.

Kyle Morganti, Earth Science (MS)  |  Poster  |  12:05 p.m. - 1:10 p.m.

**THE EFFECT OF THE MULTIDECADAL OSCILLATION (AMO) ON NORTH ATLANTIC TROPICAL DEVELOPMENT**

The Atlantic Multidecadal Oscillation (AMO) is a climatological pattern that impacts sea surface temperatures in the North Atlantic Ocean. Controversy exists regarding this model's influence on tropical development in the North Atlantic basin. Since vertical wind shear and warm sea surface temperatures are key ingredients for tropical development, the hypothesis is that when the AMO index is negative, there is a significant increase in the frequency and intensity of tropical activity in the North Atlantic Ocean, and likewise, a significant decrease in the frequency and intensity of tropical activity when the AMO index is positive.

Chelsea Neal, Psychology (MS)  |  Presentation  |  10:50 a.m. - 12:05 p.m.

**REACHING UNDERSERVED STUDENTS THROUGH ANIMAL ASSISTED INTERVENTIONS**

We researched how animal assisted interventions, specifically animal assisted activities (our pet therapy program) could benefit underserved populations on MU campus. This is a general “meet and greet” activity that involves working with KPETS to have their trained therapy dogs visit our students once a month every Tuesday. We saw results such as increased happiness, decreased loneliness, decreased depression, and less homesickness.

Claire Porter, Jay Barnica, Rashid Noah, Maria Rovito, English (MA) |  Exhibit  |  All Day

**MUSINGS: THE GRADUATE JOURNAL**

The publication of MUsings: The Graduate Journal showcases the academic work of graduate students at Millersville University. The journal invites students to present highlights of their work in a venue that bolsters career-building experiences and celebrates their scholarly efforts. Graduate students from the English department serve on the Editorial Staff. Each issue may feature research articles, short stories, and literary essays. With this publication, MUsings seeks to encourage student creativity, commend innovative research, and generate student engagement in the academic and professional communities.

**OFFICE OF EXPERIENTIAL LEARNING AND CAREER MANAGEMENT**

MU Interns with Michele Boté |  Poster  |  12:05 p.m. - 1:10 p.m.

**MILLERSVILLE UNIVERSITY INTERNSHIP SHOWCASE**

Millersville University Internship Showcase provides the students with the opportunity to share their meaningful experiences, detailing projects and skills learned at their internship as well as offering insights into their experiences of the organizational culture of the business and how that may inform their future career decisions. The Millersville community - students, faculty, staff and invited employers - are afforded the opportunity to become more familiar with the range of internships MU students engage in with employers and non-profit organizations. These internships not only allow the students to receive hands-on learning and mentorship but they also receive academic credits toward their degree requirements.

**SOCIAL HOUR (4-5 p.m.)**

Please join us after the conference for the annual Made in Millersville Social Hour! Stop by McNairy Library’s first floor lobby throughout the hour for ice cream, fun, and a professional photo booth, and enjoy the opportunity to meet faculty members, student presenters, and the volunteers behind the scenes.

**CONNECT WITH US ON SOCIAL MEDIA:**

Instagram: @madeinmillersville and @mim_journal #MadeinMU2018