



NORTHWEST OHIO UNDERGRADUATE SYMPOSIUM FOR RESEARCH AND SCHOLARSHIP

SATURDAY, APRIL 13, 2019
9 A.M. TO 1 P.M.
OLSCAMP HALL, BGSU

BGSU | Center for
Undergraduate
Research and Scholarship
BOWLING GREEN STATE UNIVERSITY

BELONG. STAND OUT. GO FAR.™
CHANGING LIVES FOR THE WORLD.

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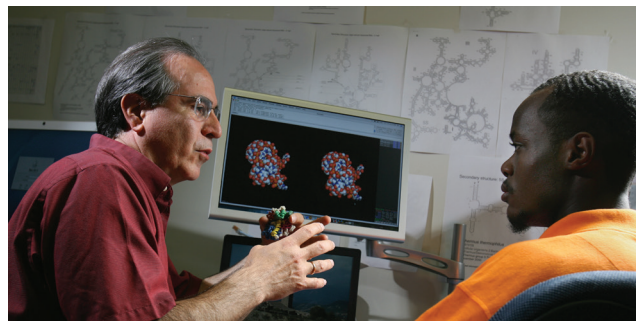
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bgsu.edu/cursresearchposters

The Undergraduate Symposium for Research and Scholarship
online evaluation can be found at:

bgsu.edu/curssurvey

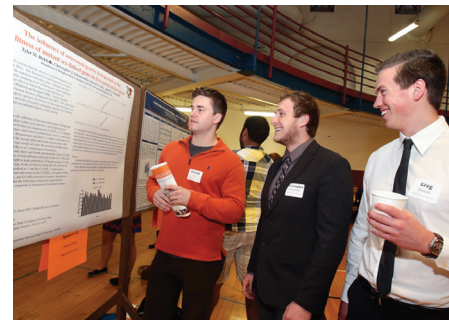
BGSU | Center for
**Undergraduate
Research and Scholarship**
BOWLING GREEN STATE UNIVERSITY



SCHEDULE OF EVENTS

Saturday, April 13

8:30 a.m.	Doors Open	Olscamp Hall
9:00 a.m. – 9:20 a.m.	Welcome and Opening Remarks <ul style="list-style-type: none"> • Dr. Cordula Mora, Director, Center for Undergraduate Research and Scholarship • Rodney K. Rogers, Ph.D. '81, President, Bowling Green State University • Dr. Dawn Shinew, Dean, College of Education and Human Development 	Olscamp Hall Room 101
9:20 a.m. – 9:30 a.m.	Presentation of the Undergraduate Faculty Mentor of the Year Award <ul style="list-style-type: none"> • Dr. Lisa Martin, Assistant Professor of Music Education, College of Musical Arts 	Olscamp Hall Room 101
9:30 a.m. – 9:45 a.m.	Light Breakfast Served	Olscamp Hall Room 101
9:45 a.m. – 1:00 p.m.	Poster Judging and Public Viewing	Olscamp Hall
9:45 a.m. – 11:05 a.m.	1st Round of Oral Presentations	Olscamp Hall Rooms 201, 208, and 225
11:15 a.m. – 12:55 p.m.	2nd Round of Oral Presentations	Olscamp Hall Rooms 201, 208, and 225
11:30 a.m. – 1:00 p.m.	Light Lunch Served	Olscamp Hall Room 101
12:55 p.m. – 1:00 p.m.	Closing Remarks <ul style="list-style-type: none"> • Dr. Cordula Mora, Director, Center for Undergraduate Research and Scholarship 	Olscamp Hall Room 101



WELCOME

Welcome to the Undergraduate Symposium for Research and Scholarship!

It is no secret that the driver of innovation in America is the strength of creative and critical thinking researchers, scholars, and artists in all fields. While American culture often emphasizes the work in STEM fields – science, technology, engineering, and math – this symposium strives to recognize excellence in academic pursuit across all disciplines, including the arts and humanities, social sciences, education, business, the creative disciplines, as well as the STEM fields. At Bowling Green State University (BGSU), we provide students with the opportunity to develop skills for research, inquiry, critical thinking, creativity, and scholarship through a variety of programs and experiential learning opportunities.

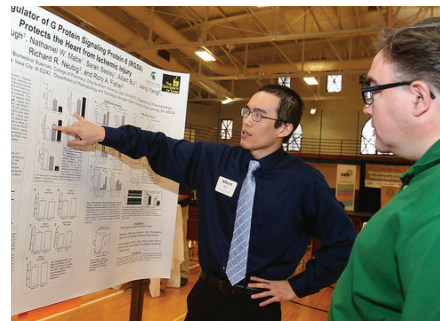
Today, we feature the works of BGSU undergraduate students with a wide range of disciplines being represented at this annual Undergraduate Symposium for Research and Scholarship. I would like to welcome our students, their faculty mentors, their family and friends, as well as any visitors to our campus on Preview Day to this event and encourage them to help us celebrate undergraduate research, scholarship and creative achievements here at BGSU.

The Center for Undergraduate Research and Scholarship (CURS) supports and fosters undergraduate research, scholarship, and creative activities across all disciplines. Such activities are defined as any research, scholarly, or creative project that 1) makes an original intellectual contribution to the discipline, 2) is conducted under the guidance of a faculty mentor specializing in a discipline relevant to the project, and 3) is aimed to be disseminated to student peers, experts in the field, and/or the wider community. Student participants working on such projects are not only able to deepen their understanding of their chosen discipline through hands-on experience while working closely with a faculty mentor, but they are also able to take pride in their intellectual contribution to their field while at the same time preparing themselves for graduate studies or work-life.

As the Director of CURS I would like to congratulate all of the students whose work is being showcased today for challenging and engaging themselves in exemplary ways in research, scholarship and creative work.



Sincerely,
Dr. Cordula Mora, Director
Center for Undergraduate Research and Scholarship (CURS)



GUEST SPEAKERS



Dr. Cordula Mora grew up originally in Germany and was always very interested in understanding why animals behaved the way that they did. She completed her undergraduate and graduate education at the University of Auckland in New Zealand. There she worked for her Ph.D. thesis with homing pigeons trying to understand how they use the Earth's magnetic field to home back to their loft from completely unfamiliar places. For her postdoctoral studies at the University of North Carolina she investigated the behaviour of loggerhead sea turtles to see how they use various sensory cues to find their way in their home territory as well as during long-distance migrations.

In 2009, she joined the Psychology Department at BGSU, where she continued her navigation research with homing pigeons as part of the J.P. Scott Center for Neuroscience, Mind & Behavior. She became the director of the Center for Undergraduate Research and Scholarship in 2014.



Rodney K. Rogers, Ph.D. '81, assumed the role as the 12th president of Bowling Green State University on February 23, 2018, after serving in the interim post since January 1, 2018. Prior to being named president, Rogers had served as provost and senior vice president since 2012 and, before that, dean of the BGSU College of Business since 2006.

Experienced in both academia and business, Rogers has a Ph.D. from Case Western Reserve University, an MBA from BGSU and a B.A. in music from Ohio Northern University. Before completing his doctorate at Case, he practiced as a CPA for 10 years.

As BGSU's chief academic officer, Rogers was a key architect of efforts and initiatives that have contributed to BGSU seeing significant increases in student success including its best four-year graduation rate as well as the highest freshmen academic profile in the University's history.

He has overseen the addition of academic programs aimed at meeting today's workforce needs; increased opportunities for education abroad, co-ops and internships that prepare students for employment; the alignment of the University's academic budget with its strategic plan; been engaged in philanthropic activities that resulted in major gifts to support student scholarships, professorships and facility naming.

Dr. Rogers is committed to continuing BGSU's upward trajectory as the campus continually evolves to meet students' needs and embrace the most current best practices in higher education. It is the University's mission to nurture intellectual and personal growth, creativity and the pursuit of excellence in a collaborative, mutually respectful environment.



Dr. Dawn Shinew is the dean of the College of Education and Human Development. A two-time alumna of BGSU, Dr. Shinew returned to the institution in 2012 as Director of the School of Teaching and Learning. She served in that capacity for three years before stepping into her role as Dean. Prior to coming to BGSU, Dr. Shinew spent almost 15 years at Washington State University as a faculty member and department chair. Dr. Shinew earned her Ph.D. from Ohio State University. Dr. Shinew is a strong advocate for the role of inquiry in preparing students for their lives, both personally and professionally. According to Shinew, "Understanding the research process is fundamental to thinking critically and being an engaged, informed participant in the world."

UNDERGRADUATE RESEARCH AND SCHOLARSHIP OPPORTUNITIES AT BOWLING GREEN STATE UNIVERSITY

Bowling Green State University strives to increase the visibility, prestige, and material support for participation in research, scholarly and creative activities by undergraduate students. Our belief is that critical and constructive thinking as well as communication are infused into the process of scholarly discovery and the dissemination of results. To that end, BGSU offers programs to enhance the experiential learning experience of undergraduate students by providing support through mentorship, funding, and skill development. Participants do not only experience pride from making an original intellectual or creative contribution within their chosen discipline, but they are better prepared for graduate studies or work-life.

The Center for Undergraduate Research and Scholarship (CURS)

<http://www.bgsu.edu/offices/curs/>

Established in 2004, the mission of CURS is to enhance the undergraduate experience with meaningful research, scholarly, and creative activities in all fields of study. Through experiencing the processes of discovery and dissemination of their results, students become fully engaged members of our learning community.

- Open to all undergraduate students at BGSU from all disciplines
- Fall and spring research grants of up to \$500 for the faculty mentors lab for supplies and a \$200 stipend for the student
- Summer research grants of up to \$500 for the faculty mentors lab for supplies and a stipend of up to \$2,500 for the student are available to support a 10-week (28 hours per week) intensive research project
- Travel grants of up to \$200 for students to present their research, scholarly, or creative activities selected via peer review or juried processes at regional, (inter)national conferences or exhibits.

Contact Dr. Cordula Mora at cmora@bgsu.edu for more information.

Ronald E. McNair Post-Baccalaureate Achievement Program (McNair Scholars Program)

bgsu.edu/offices/sa/trio/mcnair

The McNair Scholars Program is a U.S. Department of Education funded TRIO Program that encourages undergraduate students to pursue graduate studies by providing opportunities to define goals, to engage in research, and to develop the skills and student/faculty mentor relationships critical to success at the doctoral level. Staff work closely with program participants as they complete their undergraduate requirements to encourage them to enroll in graduate programs and to track their progress through to the successful completion of advanced degrees.

- Targets first-generation college students who are economically disadvantaged as well as students from underrepresented racial/ethnic populations with an interest in pursuing the Ph.D.
- Offers research opportunities and presentation experience under the mentorship of a faculty member. Encourages participation in seminars and workshops that assist in understanding the culture of graduate school, the graduate school admission process, and options for financing graduate education.

Contact Tracy Tabaczynski at ttabacz@bgsu.edu for more information.

Academic Investment in Math and Science (AIMS)

bgsu.edu/aims

The mission of the AIMS Program is to establish a world-class training center for graduating-women and underrepresented minorities- STEM Majors. Many of these students will proceed to get terminal degrees in their fields, then ultimately perform cutting edge research, service and/or teaching. Moreover, all should be well prepared to take advantage of an array of opportunities and make valuable contributions as STEM professionals.

- Program is open to incoming first-year students
- Yearly scholarships start at \$2,000 with annual increases for those in good academic standing
- Many program features enhance academic success and preparation for exemplary careers as STEM professionals

Contact aims@bgsu.edu for more information

Building Ohio's Sustainable Energy Future (BOSEF)

The BOSEF scholarship program is funded by the Choose Ohio First program for students in the AIMS program for students who are interested in pursuing careers in research in renewable energy and sustainable environmental practices. BOSEF draws on the special strengths of Northwest Ohio in these fields to provide state-of-the-art education opportunities. It provides scholarships and an innovative program that enriches students' opportunities for research and internships to ensure that they are optimally prepared for the next steps in their preparation for an exciting and highly successful career. Applications are submitted through the AIMS program.

Contact aims@bgsu.edu for more information

UNDERGRADUATE RESEARCH AND SCHOLARSHIP OPPORTUNITIES AT BOWLING GREEN STATE UNIVERSITY

Meeting Essential Doctor Needs in Urban and Rural Areas (MEDNURA)

The MEDNURA scholarship program is also funded by the Choose Ohio First program and designed to recruit and support under-represented minority and economically disadvantaged students from urban and rural areas to become physicians providing primary care in under-served areas. Like BOSEF, MEDNURA is also part of the AIMS program and includes all of the support structures and strategies of that program plus additional activities and features to help prepare students for success in applying to and preparing for medical school, especially for the NEOMED-BGSU Pathway program which offers early admission to the NEOMED medical school program.

Contact aims@bgsu.edu for more information.

Northern Ohio Alliance for Graduate Education to the Professoriate (NOA-AGEP) bgsu.edu/noaagep

Funded by the AGEP program of the National Science Foundation, the primary goal of NOA-AGEP is to increase the number of URM graduate and post-doctoral trainees in STEM fields throughout Northern Ohio who complete doctoral degrees and go on to successful careers in the professoriate. This is accomplished through the development, implementation, and study of innovative evidence-based models, designed to address the unique challenges faced by URM students and to improve their participation, preparation, and success in STEM graduate education and post-doctoral training. Each year, BGSU AGEP Scholars receive:

- A stipend enhancement (in addition to department funding)
- Travel allowance to attend a research conference
- Opportunities to participate in professional development activities/community building events
- Participation in annual research symposia
- A strong, supportive community of scholars and faculty

Contact noa-agep@bgsu.edu for more information.

Northwest Ohio Center for Excellence in STEM Education (NWO)

nwocenter.org

The Northwest Ohio Center for Excellence in STEM Education (NWO) strives to advance STEM education for people of all ages. To serve that mission NWO hosts a wide range of activities, events, initiatives, and programs. Among these are projects which promote the success of under-represented minority and female students in STEM undergraduate and graduate degree programs funded by state and federal grants: Building Ohio's Sustainable Energy Future (BOSEF) and Meeting Essential Doctor Needs in Urban and Rural Areas (MEDNURA) which are funded by the Choose Ohio First Program of the Ohio Board of Regents, and the Northern Ohio Alliance of the AGEP program funded by a grant from the National Science Foundation's Alliance for Graduate Education to the Professoriate (AGEP) program. NWO also plays a role in the AIMS program (Academic Investment in Mathematics and Science).

Contact nwo@bgsu.edu for more information.

Science & Math Education in ACTION (ACTION)

bgsu.edu/action

The ACTION program provides innovative opportunities to BGSU students to prepare the best science and mathematics teachers in the state of Ohio. The goal of ACTION is to increase the number of science and mathematics education graduates and to improve their effectiveness at teaching these subjects. The program achieves these goals by providing early exposure to hands-on science, mathematics, and education topics, research experience, and a "family" atmosphere. Available for incoming first-year students at BGSU who are Ohio residents. Open to top students interested in teaching science and/or mathematics in grades 4 through 12.

Funding covers: a four-year academic scholarship that increases every year, an all-expenses paid residential Summer Bridge experience before freshman year, first-year science or mathematics group research project, sophomore year science or mathematics practicum experience, junior and senior year pedagogical (classroom) research project.

Contact action@bgsu.edu for more information.

ORAL PRESENTATIONS OVERVIEW

Room 201

Moderators: Carrie Hamady & Dawn Shinew

- 9:45-10:05 a.m. **Lizzy Traxler (BGSU)** - Animated Case Study Videos: A Creative Approach for Exploring Health and Wellness in the High School to College Transition
- 10:05-10:25 a.m. **Quinton Morckel, Curtis Sluterbeck & Reallity Doss (BGSU)** - How Political Views Shape Your Opinions On Law Enforcement Officers
- 10:25-10:45 a.m. **Hannah Cubberley, Rachel Martin & Maxwell Seeley (BGSU)** - The "Pink Wave" Fails to Come Ashore in Ohio: Gendered Coverage of the Governor's Race in the State's Top Newspapers
- 10:45-11:05 a.m. **Michael Borowski (BGSU)** - Field Experiences in Politics

Moderators: Jerry Schnepf & John Farver

- 11:15-11:35 a.m. **Angela Li (BGSU)** - Buying the Black Swamp: Understanding changing conceptions of the Midwest environment through green spaces
- 11:35-11:55 a.m. **William Robinson, Rachel Crowl, Noah Dubasik, Melanie Moore, Alyssa Tomins, Audrey Schweers and Elaina Eskins (BGSU)** - Puerto Rico: After The Disaster
- 11:55 a.m.-12:15 p.m. **Kathlyn Richmond (BGSU)** - Students in Technology
- 12:15-12:35 p.m. **Lucas Hartman (BGSU)** - Creating the Right Atmosphere for the Library of the Future: The Jerome Academic Commons
- 12:35-12:55 p.m. **Liz Kunkler (BGSU)** - One Fails, We All Fail

Room 208

Moderators: Madeline Duntley & David Tobar

- 9:45-10:05 a.m. **Angelica Euseary (BGSU)** - The Effects of the Media Representation of the Emmett Till Trial
- 10:05-10:25 a.m. **Meghan McKinley (BGSU)** - A Drink of Lemonade to Help the Patriarchy Go Down
- 10:25-10:45 a.m. **Alannah Reisling (BGSU)** - Fraternities, Sororities, and Risky Sexual Behavior
- 10:45-11:05 a.m. **Angela Perry-Hudson (BGSU)** - Redistrict Detroit

Moderators: Liz Bayan & Mille Guldbeck

- 11:15-11:35 a.m. **Sarah Reen (BGSU)** - Look Between the Pixels
- 11:35-11:55 a.m. **Claudia Riedy & Gabrielle Kreitzer (BGSU)** - Advantages of Teaching Visual Arts to Inclusive Learners and the Importance of Pre-Service Experience
- 11:55 a.m.-12:15 p.m. **Emma Stumpf (BGSU)** - A Sensory-Friendly Musicking Experience
- 12:15-12:35 p.m. **Thomas Worrell (BGSU)** - The Story of Flying On Land
- 12:35-12:55 p.m. **Monica Yost (BGSU)** - Globalization of Asian Pop Music

Room 225

Moderators: John Farver & Jerry Schnepf

- 9:45-10:05 a.m. **Kebron Assefa (The University of Toledo)** - New Structure in Sperm; Mechanism of Formation
- 10:05-10:25 a.m. **Amanda Morris (BGSU)** - Runoff Reduction Through Polymer Treated Manure
- 10:25-10:45 a.m. **Noah Froelich & Rebecca Stayer (BGSU)** - Oxidizing Fentanyl with Household Cleaners
- 10:45-11:05 a.m. **Derek Smith (Ohio Northern University)** - The Evolved Parallel Spiking Neural Network

Moderators: Mousumi De & Irina Franke

- 11:15-11:35 a.m. **Da'Ja'Nay Askew (Defiance College)** - To Hire or Not to Hire: Measuring how Black Women's Hair Texture Influences Perception
- 11:35-11:55 a.m. **Kinzey Schreiber (BGSU)** - Watching Witches: Witchcraft and Gender in Media
- 11:55 a.m.-12:15 p.m. **James Hoag (BGSU)** - Age Gaps in Same-Sex Partners
- 12:15-12:35 p.m. **Stephanie Cotrone & Lauren Lash (BGSU)** - London Study Abroad: Cultural Differences in the Arts and in Public
- 12:35-12:55 p.m. **Ian Miller (BGSU)** - Propagating Identifiable Alien Natural Properties with Recombination

ORAL PRESENTATIONS

Name: Lizzy Traxler (BGSU)

Faculty Mentors: Mary-Jon Ludy, Amy Morgan and Jess Kiss

Department: Public and Allied Health and Human Movement, Sport, and Leisure Studies

Presentation Time: 9:45-10:05 a.m.

Location: Room 201

Animated Case Study Videos: A Creative Approach for Exploring Health and Wellness in the High School to College Transition

Are you looking for a creative way to introduce health- and wellness-related topics in the college setting? First-year students in Bowling Green State University's Health, Wellness, and You Learning Community are gaining knowledge about common issues that affect college students by viewing brief animated case study videos, paired with interactive discussion. In this session, you will learn about the student-generated health and wellness data that drives case study topics, view student-generated case study videos, and learn about affordable platforms that are used to develop animated videos.

Names: Quinton Morckel, Curtis Sluterbeck and Reallity Doss (BGSU)

Faculty Mentor: Hee Soon Lee

Department: Health and Human Service

Presentation Time: 10:05-10:25 a.m.

Location: Room 201

How Political Views Shape Opinions On Law Enforcement Officers among College Students

The men and women who of law enforcement are not always viewed in the best light and today's political spectrum is fueling this problem even more. To find a solution, we want to try to find a way to ease tensions between college student's different political views and law enforcement. This is a clear problem that needs to be resolved in order to have a better and safer country to live in, and to show homage to those who deserve it (Nofziger, 2003). Regardless to us going into law enforcement, we felt that it was imperative to see if there is a correlation between the ways that college students are currently thinking, versus the way that they view law enforcement as a whole. Our research questions are, "How do college students who identify as Democrat/Liberal view law enforcement?" and "How do college student who identify as Republican/Conservative view law enforcement?" With this our hypothesis is, "Those who identify as Republican/Conservative will have better views towards law enforcement than those who identify as Democrat/Liberal." We are sampling roughly 50-100 BGSU students using a questionnaire. We'll be using simple random sampling and snowball sampling to conduct our survey. Some limitations that we might encounter is a small sample size due to lack of response. To help with this possible limitation, we will send out a second round of emails notifying students to take it if they haven't. We are expecting to find a correlation between political affiliations and police relations. More so those who identify as Republican/Conservative will have a more positive view towards law enforcement than those who identify as Democrat/Liberal.

Names: Hannah Cubberley, Rachel Martin and Maxwell Seeley (BGSU)

Faculty Mentor: Mellissa Miller

Department: Political Sciences

Presentation Time: 10:25-10:45 a.m.

Location: Room 201

The "Pink Wave" Fails to Come Ashore in Ohio: Gendered Coverage of the Governor's Race in the State's Top Newspapers

The "Pink Wave" Fails to Come Ashore in Ohio: Gendered Coverage of the Governor's Race in the State's Top Newspapers explores gender bias in the local print media coverage in the months leading up to November 6. Four highly qualified female candidates emerged from both the Democratic and Republican; however, after months of media coverage and campaigning, these four women all failed to secure their party's nomination for governor. Because media coverage can impact voter attitudes towards candidates, we seek to uncover if media bias permeated coverage of these four women. We ask: Was press coverage of the Ohio governor's race gendered? In other words, was coverage of male candidates superior to that of female candidates in terms of quantity and/or quality?

ORAL PRESENTATIONS

Name: Michael Borowski (BGSU)
Faculty Mentor: Neil Browne
Department: Political Sciences
Presentation Time: 10:45-11:05 a.m.
Location: Room 201

Field Experiences in Politics

This project attempts to join the dialogue surrounding potential solutions to citizenship apathy in young adults. To better understand the prevalence of citizenship apathy in Bowling Green, I use community research methods including an interview with issue leader Phil Rich. Motivated by the pervasiveness of this issue, I analyze potential solutions and their likelihood to succeed based on a review of the existing literature. After determining the most feasible solution via the literature review, I propose that an appropriate step to take in the direction of resolving citizenship apathy in Ohio is to implement a requirement for students to complete a political field experience in their high school US Government class. Planning to implement such a policy, I compile resources from the Bowling Green State University Center for Community and Civic Engagement and various other sources to detail the policy, plan for its implementation, and theorize potential challenges to its application. By examining evidence from these sources, I conclude that completing the proposed requirement will likely increase interest in traditional politics, generate marketable skills in young people, and develop an avenue for young adult political participation in the future.

Name: Angela Li (BGSU)
Faculty Mentor: Amilcar Challu
Department: History
Presentation Time: 11:15-11:35 a.m.
Location: Room 201

Buying the Black Swamp: Understanding changing conceptions of the Midwest environment through green spaces

Because the Black Swamp region was covered for centuries in dense oak forest and swampland, Euro-American exploration and settlement occurred later and more slowly than it did in other regions of the United States. This project examines how an area of deadly “wilderness” along the Maumee River became the site of complex, evolving systems of transportation, resource extraction, agricultural development, recreational activities, and environmental conservation. Areas along the Maumee River are useful for visualizing trends in the way the inhabitants of the American Midwest related to their landscape. These trends were reflected in changes in property valuation over time. My research contextualizes historical property values of contemporary public spaces in a broader narrative that seeks to draw connections between the early commoditization of the land by early settlers pursuing state incentives to “tame” the wilderness, the extraction economy and lumber communities established along the river by clear-cutting timber companies, the rise of recreation and of public interest in environmental conservation, and importantly, the relationship between the Black Swamp’s parks and preserves with the new market economy and philanthropy under capitalism. Finally, I examine the way Midwestern conceptions of humans’ relationship to the wilderness fits into national conversations raised by literary figures such as Emerson and Thoreau, the artists of the Hudson River Valley school of painting, and contemporary science writers such as Rachel Carson and Michael Pollan, thus connecting the environmental history of the Black Swamp to developing literary, philosophical, and artistic movements of America.



ORAL PRESENTATIONS

Names: William Robinson, Rachel Crowl, Noah Dubasik, Melanie Moore, Alyssa Tomins, Audrey Schweers and Elaina Eskins (BGSU)

Faculty Mentor: Tim Brackenbury

Department: Communication Sciences and Disorders

Presentation Time: 11:35-11:55 a.m.

Location: Room 201

Puerto Rico: After the Disaster

The academic landscape encourages students to examine issues through a critical lens by asking questions, evaluating evidence, and gathering relevant information. The purpose of these exercises can depend on the subject material that compels them. In recognition of this and with a desire to understand how and why we see issues in a light representative to our own lived experience, the Honors College developed a seminar to examine relief efforts in the U.S. territory of Puerto Rico following the devastation caused by Hurricane Maria. Applicants recognize that the relief and recovery processes after a natural disaster involve competing interests and needs. To this end, we have researched the elements of disaster recovery, case management, and the approaches taken by various relief agencies and actors. The culmination of these efforts led to a service trip to Puerto Rico designed to engage participants in a community based learning experience that explored the elements of relief and recovery previously mentioned. Applicants believe that the findings will provide perspective of how the relief process is conducted through a critical analysis of the human, economic, and social capital involved in the relief and recovery process. Such perspective will prove valuable to those for who see direct service as a way to explore an issue outside of the traditional academic setting. In doing this, we hope to help others understand the way people affected by disasters return to their lives and how those who assist them can serve as the best part of somebody's worst day ever.

Name: Kathlyn Richmond (BGSU)

Faculty Mentor: Resmi Krishnankuttyrema

Department: Engineering Technologies

Presentation Time: 11:55 a.m.-12:15 p.m.

Location: Room 201

Students in Technology

Over the past few semesters we have studied women in technology majors to try to improve recruitment and retention rates at Bowling Green State University. This past semester we conducted and analyzed a survey to understand our students' choices related to the technology majors. We plan to utilize this information to promote and encourage more students to choose technology related majors and help the retention of current technology students.

Name: Luca Hartman (BGSU)

Faculty Mentor: Sara Khorshidifard

Department: Architecture and Environmental Design

Presentation Time: 12:15-12:35 p.m.

Location: Room 201

Creating the Right Atmosphere for the Library of the Future: The Jerome Academic Commons

The William T. Jerome Library has towered over the campus of Bowling Green State University for over 50 years and after a previous study of the application of Architectural Adaptive Reuse on college campuses, it was determined that the Jerome Library could be a good candidate for this as well. A qualitative research study followed including interviews with Library and University staff to determine the present, and future, needs of the departments housed inside. This resulted in a conceptual proposal of laying out new spaces in the existing structure. Central to the design of any space though is the intangible idea of "atmosphere". This describes the effect that the built environment has on the experiences of a person inside of that space. Some atmospheres are best suited for working out, listening to a speaker, interacting with fellow students, or just reading a book. In order to make the atmosphere more tangible, case studies of successful and unsuccessful study spaces are analytically deconstructed into separate architectural elements. Multiple spaces are then compared against each other to find underlying themes. With changes in learning pedagogy, how students interact with classmates, faculty, and information has shifted and since libraries are at the core of all this academic activity, the atmosphere of the modern library must shift to meet this demand.

ORAL PRESENTATIONS

Name: Liz Kunkler (BGSU)

Faculty Mentor: Amy Fidler

Department: Art – Graphic Design

Presentation Time: 12:35-12:55 p.m.

Location: Room 201

One Fails, We All Fail

Small business dairy farmers are taken for granted. We know they exist, but we do not take the time to truly appreciate them. It's not just the long process of getting calf to milk jugs; that people don't realize it's the balancing act of farming and participating in other parts of life. One Fails, We All Fail is a visually overwhelming mechanism made up of wooden clocks and gears that reflects my life. Farming is the core gear that keeps the family running. However, farming itself is affected by many factors such as animal health, weather, world trends, competition of name brands and finances. This mechanism gives insight of how farming affects my own family. Therefore, I constructed a main gear that is in the center of the mechanism that represents farming and within that gear contains smaller gears that represent the main factors I listed in the above. Around this main gear are 6 clocks to represent each member of my family. The hierarchy of our family is reflected in the size of the clocks themselves, therefore my parents are the biggest clocks and my youngest sister is the smallest. Around each clock are gears that represent the 5 main parts of life: social, spiritual, health, work/career and family life. While each design of the gears are the same, the size and markings vary.

Name: Angelica Euseary (BGSU)

Faculty Mentor: Thomas Edge

Department: Ethnic Studies

Presentation Time: 9:45-10:05 a.m.

Location: Room 208

The Effects of the Media Representation of the Emmett Till Trial

Emmett Till was murdered in August 1955 and his murderers were acquitted even after they publicly admitted to killing him. In 2017, Carolyn Bryant confessed her claims that Till harassed her were false. This research is an analysis of how the media representation of the trial influences the narrative presented. This research uses articles, books, and survey data to find correlations between race and knowledge of the case. This presentation is a continuation of a previous project where I analyzed the news coverage of the trial in the 20th century. Throughout this research, I found that there were many different ways people learned about this case and that it is a reflection of race relations in American history.

Name: Meghan McKinley (BGSU)

Faculty Mentor: Thomas Edge

Department: Ethnic Studies

Presentation Time: 10:05-10:25 a.m.

Location: Room 208

A Drink of Lemonade to Help the Patriarchy Go Down

Allyship in pursuit of equality must be practiced at all times. It is a process one must push themselves through and learn from. How a person consumes media and engages in its dialogue is a significant aspect of allyship. As an Asian woman of color identifying person, I have my fair share of experiences living in a patriarchal society and the forms of resistance that have grown as a result. It is still my responsibility as an ally of color to recognize the intersections of other women's oppression and absorb media with that knowledge. In my positioning I analyzed Beyoncé's visual album Lemonade as a woman of color who connects to the material through shared emotions and the collective goal of destroying the white supremacist heteropatriarchy. I pose the question: how can we, the consumer, actively practice allyship through our consumption and decoding of Lemonade? Through a critical analysis of the film, I determined three elements in Lemonade that a viewer must acknowledge: the recognition that women of color's anger is valid and stems from the systematic oppression they have endured, the realization and acceptance that the patriarchy will be torn down and set aflame, and the understanding that forgiveness cannot be claimed it must be earned.

ORAL PRESENTATIONS

Name: Alannah Reisling (BGSU)

Faculty Mentor: Amanda Cook

Department: Economics

Presentation Time: 10:25-10:45 a.m.

Location: Room 208

Fraternities, Sororities, and Risky Sexual Behavior

Sororities and fraternities are a large part of many college's campus culture. They provide a place for students to get involved, volunteer, and gain great professional experience. While there are many benefits for students, Greek life has been plagued with stereotypes like hazing, sexual assault, binge drinking, and sexual promiscuity. In this paper, I investigate whether fraternities and sororities cause members to engage in riskier sexual behaviors than their non-Greek counterparts. After running all three estimation strategies on each of our variables for risky sex, I found different predictive associations. The variable risky sex, as it pertains to vaginal sex without a condom, predicted a positive relationship between Greek membership and risky sexual behavior during vaginal sex. However, the IV regression predicted no relationship. This differs from our results about behaviors during anal sex. The Logit and OLS models for condom use during anal sex found statistically significant positive association between Greek life and risky condom use during anal sex. Furthermore, when we used an IV regression to further test the data, we found significant statistics for the positive relationship between fraternity membership and risky sexual behavior during anal sex. These results are interesting and have significant implications for public health legislators, university administrators, and Greek organizations.

Name: Angela Perry-Hudson (BGSU)

Faculty Mentor: Peter VanderHart

Department: Economics

Presentation Time: 10:45-11:05 a.m.

Location: Room 208

Redistrict Detroit

Will redistricting Detroit, allow for sustainable economic growth and the implementation of proposed projects from Detroit Future City? Detroit, Michigan is slowly but surely improving its economy and job market. Since 2010, the once failing city has added 30,000 jobs to its job market and increased its economy from 25 jobs per 100 residents to 30 jobs per 100 residents. Though the city is experiencing great reform, it appears to be targeted towards the Downtown and Midtown areas. Detroit Future City reports that, "These jobs are concentrated along Woodward Avenue in Downtown and Midtown, as well as in the city's core industrial areas (24)." Many neighborhoods where old Detroiters reside are still under distress while Downtown and Midtown are flourishing, leaving residents to feel disconnected from the resurgence. More than 40% of Detroit residents, and 57% of its children under the age of 18, live below the federal poverty line of \$24,339 for a family of four. (18) Along with high poverty levels, the newly added jobs aren't being filled by Detroit's majority population. Detroit Future City proposes several different projects in support of the entire city's development, but the current environment may not be suitable for their implementations. To create environments for sustainable economic growth, redrawing city council district lines is the focus of this project.



ORAL PRESENTATIONS

Name: Sarah Reen (BGSU)
Faculty Mentor: Leigh-Ann Pahapill
Department: Art
Presentation Time: 11:15-11:35 a.m.
Location: Room 208

Look Between the Pixels

Look between the Pixels will present the findings of my Fall 2018 CURS research which explored the connections between Video Art and Video Games. Both are forms of New Media that with the continued advancements of technology, have rapidly progressed and evolved; allowing both to have fascinating attachments to one another. My research focused on one specific aspect of these attachments: capitalism and how that affects artistic expression. I will also briefly touch upon my Spring 2019 CURS research and how I hope to continue this exploration.

Names: Claudia Riedy and Gabrielle Kreitzer (BGSU)
Faculty Mentor: Mousumi De
Department: Art Education
Presentation Time: 11:35-11:55 a.m.
Location: Room 208

Advantages of Teaching Visual Arts to Inclusive Learners and the Importance of Pre-Service Experience

As schools strive towards providing a more inclusive learning environment, it is more necessary than ever that future art educators have experience working with students with special needs. Art classes have proven to be an extremely beneficial component in the education of inclusive learners. Visual arts course provides inclusive learners with an opportunity to develop fine motor and problem-solving skills, communication and self-expression, and higher self esteem with a motivation to create. It is necessary that future art teachers have experience working with students with various disabilities in order to be fully prepared and qualified as visual arts educators in the 21st century. However, in university art education programs, there are few opportunities for pre-service art educators to get actual field experience teaching art to special needs students. The course "ARTE 3650, Art with Inclusive Learners", taught as part of the Art Education program at Bowling Green State University, provides us with an opportunity to teach such students and forms the background for this research. We will be discussing the advantages of teaching visual arts to inclusive learners as understood from art lessons implemented with students in the ARTE 3650 course as well as the importance of pre-service experience in teaching such students through field placements. Through these experiences, we can determine what teaching strategies are effective and what accommodations art teachers must make for inclusive learners and how this directly and positively impacts the special needs population.

Name: Emma Stumpf (BGSU)
Faculty Mentor: Lisa Martin
Department: Music Education
Presentation Time: 11:55 a.m.-12:15 p.m.
Location: Room 208

A Sensory-Friendly Musicking Experience

For individuals with sensory processing disorders, attending a traditional musical performance can be uncomfortable, inaccessible, and sometimes impossible. From the duration of the performances, the overwhelming variety and volume of sounds, as well as the rigid, unwritten rules that performances in the Western art music tradition demand, typical concert settings present challenges for many of those with sensory processing disorders. These challenges include hypersensitivity to lights and sounds, as well as being asked to remain quiet and seated for long periods of time. This project is a research-based creative endeavor centered upon individuals with sensory processing disorders – specifically, those with autism spectrum disorder. In particular, I researched this population's interactions with music, as both listeners and creators. In my initial research, it was difficult to identify a comprehensive literature review specific to this area of research. The resources for music performers and educators alike are minimal, and consequently, the resources for students who experience sensory processing disorders are also limited. This project will help bring awareness to a population of people that simply need more attention in the field of music education. Upon deepening my understanding of the various challenges this population faces, I produced a sensory-friendly musicking experience. This experience featured opportunities for our attendees to try various musical instruments as well as enjoy a concert-going experience that is tailored specially with their needs in mind.

ORAL PRESENTATIONS

Name: Thomas Worrell (BGSU)
Faculty Mentor: Daniel Picollo
Department: Music
Presentation Time: 12:15-12:35 p.m.
Location: Room 208

The Story of Flying On Land

This is an oral presentation, aided by a slide show, which gives the story surrounding the creation of my EP flying on land. Starting from where I got the idea, to how it came to fruition, to what happened in the recording studio and how the CD's got made.

Name: Monica Yost (BGSU)
Faculty Mentor: Katherine Meizel
Department: Musicology
Presentation Time: 12:35-12:55 p.m.
Location: Room 208

Globalization of Asian Pop Music

Recently, Asian culture and popular music have experienced a surge of global attention. Western culture developed a craze for K-pop and Japanese anime. The virtual J-pop star Hatsune Miku, K-pop idol group SHINee, and other Asian artists have toured the United States and gained a large fan base. YouTube and other social media venues now provide Americans with unprecedented access to music from outside their country. Countries use music to boost economic systems through global attention and tourism. Governments instill nationalistic ideologies through television shows and schooling systems. This public musicology project seeks to provide an accessible recourse for students and researchers addressing this globalization of Asian popular music. We'll consider differences and similarities in how pop culture works in Asian and Western countries, and how economic conditions contribute to its international spreads. The project will discuss how music contributes to nationalistic ideals or convey resistance. Using a podcast format, the project will communicate aspects and effects of globalization, drawing on music scholarship and sound recording collections discoverable in BGSU's Music Library and Bill Schurk Sound Archives.

Name: Kebron Assefa (The University of Toledo)
Faculty Mentor: Tomer Avidor-Reiss
Department: Biological Sciences
Presentation Time: 9:45-10:05 a.m.
Location: Room 225

New Structure in Sperm, Mechanism of Formation

One out of eight couples is infertile – which, in medical terminology, means the woman did not become pregnant after a year of unprotected intercourse with her partner. Previous studies in our lab using *Drosophila melanogaster* (fruit fly) as a model organism showed that infertility in these animals can be associated with a subcellular structure known as the centriole. A centriole is a protein structure in the cell that plays roles in cell division, cell-cell communication and cell motility. A typical cell has two of these centrioles, and in sperm cells, these centrioles are named Proximal Centriole (PC) and Distal Centriole (DC). During sperm maturation, the DC, is dramatically remodeled and so we call it atypical centriole. This centriole has a different shape and its defects in flies have been linked to infertility (Khire et al., 2016). This could suggest that perhaps the same is true for humans; perhaps a defect in the atypical centriole in the human sperm could lead to infertility as well. In order to better understand this atypical centriole, this research focuses on studying the interaction of two centriolar proteins, POC5 and FAM161A. We used a Yeast two-hybrid method to study their interaction and found that the beginning (N-terminus) of the FAM161A is sufficient and essential for its interaction with POC5. Additionally, the beginning of POC5 is sufficient and essential for its interaction with FAM161A. This finding now gives us an insight into the structure of the atypical centriole, paving way for better understanding and possible diagnosis of infertility.

ORAL PRESENTATIONS

Name: Amanda Morris (BGSU)

Faculty Mentor: Bob Midden

Department: Chemistry

Presentation Time: 10:05-10:25 a.m.

Location: Room 225

Runoff Reduction through Polymer Treated Manure

The primary goal of our research was to reduce agricultural runoff, and in the process, make using dairy manure as fertilizer more efficient. Currently, manure from CAFOs (Confined Animal Feeding Operation) is applied to fields in a liquid form. This liquid mix is roughly 99% liquid, with 1% solids. The liquid also contains a great deal of dissolved nutrients. This liquid mix can be easily washed off of the fields, leading to nutrients escaping into the waterways, and eventually Lake Erie, contributing to the toxic algal blooms. Using liquid manure as fertilizer is also inefficient. The bulk of the volume and mass of liquid manure is water. Our lab mixed this liquid manure with polymers that bind the solid material together, and bring the dissolved nutrients back into a solid state. This leaves behind much cleaner water, which is then evaporated out, leaving only the solids behind. This condensed solid matter is much more efficient to transport to distant fields. Our polymer treated solid manure should slowly release its nutrients, while being less vulnerable to being washed away in the rain. Our primary experiment consisted of eight soybean fields, two were unfertilized as a control, three were fertilized with the raw liquid manure, and three were fertilized with the treated, solid manure. Machines called samplers collected both surface runoff and underground runoff from tile drainage systems for each field. If the polymer treatment worked, runoff from the fields fertilized with solid polymer treatment manure should have lower concentrations of O-Phos, NH₃ and NO_x. Unfortunately, this summer was very dry, meaning our data was very limited. What data we collected seems to match our hypothesis that the treated manure is less vulnerable to runoff. Results from previous years were less limited and further showed that the treated manure did in fact reduce nutrient runoff.

Names: Noah Froelich and Rebecca Stayer (BGSU)

Faculty Mentor: Travis Worst

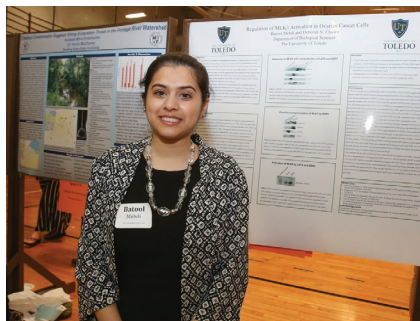
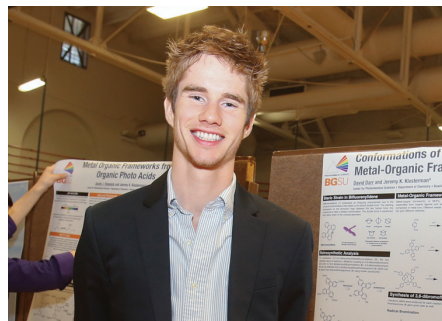
Department: Chemistry

Presentation Time: 10:25-10:45 a.m.

Location: Room 225

Oxidizing Fentanyl with Household Cleaners

Fentanyl is a schedule II prescription drug under the Controlled Substances Act. A powerful synthetic opioid analgesic, fentanyl is 50–100 times more powerful than morphine and is used for the treatment of severe pain. Recently, fentanyl and synthetic opioids have been increasingly abused, with the death rate associated with opioids and synthetic opioids rising 72.2% from 2014 to 2015. This rapid increase in toxicological events is not only putting drug users at risk, but also first responders and medical professionals treating overdose victims. There is, therefore, a critical need to identify effective and safe methods for cleaning fentanyl from contaminated surfaces. Here we examine the effects of OxiClean™ Versatile Stain Remover, Polident™ Overnight Whitening Denture Cleanser, and Jungle™ Clear Water aquarium cleanser on fentanyl. The ability of these household cleaners to breakdown fentanyl in solution is investigated, as well as their ability to clean a contaminated surface. Our study was designed to mimic a typical chemical spill in a laboratory or law enforcement setting.



ORAL PRESENTATIONS

Name: Derek Smith (Ohio Northern University)

Faculty Mentor: Heath LeBlanc

Department: Electrical and Computer Engineering and Computer Science

Presentation Time: 10:45-11:05 a.m.

Location: Room 225

The Evolved Parallel Spiking Neural Network

Many machine learning approaches rely on artificial neural networks and their training algorithms to solve given problems. However, the fixed-structure, static nature of these models is contrary to the ever-adaptive, dynamic nature of biological neural networks. Spiking Neural Networks (SNNs) partially address this problem, but at a cost of computational complexity and trainability. Proposed is a model referred to as Evolved Parallel Spiking Neural Network (EP-SNN), which enhances the dynamic and concurrent nature of SNNs in a model closely-inspired by biological neurons and synapses. EP-SNNs are optimized by a direct-encoding Genetic Algorithm (GA), a class of evolutionary computation. Parameters are flat arrays of neurons and synapses. To allow topological evolution, synapse routes and weights are parameterized. These values change as part of normal optimization alongside activation thresholds of discrete-time, Integrate-and-Fire Neurons with parameterized activation thresholds. Due to the natural concurrency of this architecture, a hybrid instruction and data-level parallelism model is implemented in EP-SNNs and the GA, allowing for GPU-accelerated evaluation of models. A number of sample machine learning problems were used to test the capabilities of the EP-SNNs. Resulting models are smaller and more efficient than their fixed-structure, 2nd-generation counterparts, and solve given problems with comparable accuracy.

Name: Da'Ja'Nay Askew (Defiance College)

Faculty Mentor: Deborah Dalke

Department: Psychology

Presentation Time: 11:15-11:35 a.m.

Location: Room 225

To Hire or Not to Hire: Measuring how Black Women's Hair Texture Influences Perception

Appearance has a strong influence on how individuals perceive others, and these perceptions can lead to assumptions and negative judgments about certain groups of people. Black women, in particular, tend to be at the forefront of this idea with their distinctive attributes. Hairstyle is the main characteristic that distinguishes Black women from women of other races, and it is a key component in their appearance. To study how Black women's hair texture influences judgement, 80 participants (38 males, 40 females, and two with no gender identity) were to take on the perspective of a potential employer and read a description about a qualified job candidate who was a Black female with either curly or straight hair. Half of the participants evaluated the candidate with curly hair, while the other half evaluated the candidate with straight hair. It was predicted that the candidate with the curly hairstyle would be voted less favorably than with the straight hairstyle and that females will vote the candidate less favorably overall than males. The results contradicted the prediction because there were no gender differences in the overall rating of candidate regardless of hair texture and curly hair was actually rated more favorably than straight hair overall. Also, there were no racial differences in the rating of candidate from participants who identified with the majority or minority race. Future research should expand on the hairstyles of Black women and judgement while



ORAL PRESENTATIONS

Name: Kinzey Schreiber (BGSU)
Faculty Mentor: Diana DePasquale
Department: Ethnic Studies
Presentation Time: 11:35-11:55 a.m.
Location: Room 225

Watching Witches: Witchcraft and Gender in Media

This presentation will review the research findings conducted in fall 2018. The presentation will surround the depictions of witches and witchcraft in the United States from the 17th century to the present day, primarily through media such as films, television shows, and books. The presentation will show this research through the examination lens of gender and sexuality. This presentation will utilize oral storytelling with the assistance of a PowerPoint presentation.

Name: James Hoag (BGSU)
Faculty Mentor: Susan Brown
Department: Sociology
Presentation Time: 11:55 a.m.-12:15 p.m.
Location: Room 225

Age Gaps in Same-Sex Partners

According to the 2017 U.S. Census Bureau, 9.4% of different-sex partners have an age gap of ten or more years. However, age gap partners experience more prejudice than those with similar ages. While research has been done on different-sex age gap marriages, little is known of same-sex age gap relationships. The purpose of this presentation is to address the gap in the literature regarding age gaps in same-sex partners to determine the prevalence of same-sex age gap relationships, the individual ages of partners in age gap relationships, the difference of income in age gap partners, and the differences of age intervals of same-sex couples. This includes the percentage of same-sex couples with six-nine year age gaps, ten-fourteen year gaps, fifteen-nineteen year gaps, and twenty or more year age gaps. With estimates predicting age gaps to be much more common in same-sex partners, I anticipate finding that age gaps are more prevalent in same-sex couples than they are in different-sex couples. The results will also give evidence to whether younger people are participating in age gap relationships, or if there are more age gaps among older adults in same-sex couples. Further, it may support or refute whether there is a large income difference between partners. By addressing the hole in the literature on age gaps in same-sex relationships, these outcomes may help serve as a basis for future LGBTQ+ research and open new discussions and a greater understanding of a common behavior among gay men.



ORAL PRESENTATIONS

Names: Stephanie Cotrone and Lauren Lash (BGSU)

Faculty Mentor: Harland Jones

Department: English

Presentation Time: 12:15-12:35 p.m.

Location: Room 225

London Study Abroad: Cultural Differences in the Arts and in Public

Stephanie Cotrone and Lauren Lash spent nine days in London, England. Throughout these nine days we were able to experience many different types of theatre spanning eleven different productions. We will show how London views the arts through the context of two specific productions, "Edward II" and "Witness for the Prosecution", as well as observations from museums and tours. The dedication of actors like Tom Stuart, who played Edward in "Edward II", and the setting of "Witness for the Prosecution" are unparalleled by experiences we have seen in the United States. The amount of art related subjects that come at little to no cost for the general public is far greater than the United States. We will compare costs, quality, and variety between the two countries to exemplify the difference in respect for the arts. We will also explore the cultural differences that lie outside of museums and theatre performances. These observations will come mostly from time spent on the Tube and eating in different restaurants. London is a very introverted city compared to experiences in Midwest America. In London public transportation is silent and no one smiles at each other. Certain chains of fast food focus on healthy meals. We will compare our observations of London's daily commute and the types of food offered to contextualize the differences between London and living in BGSU. Overall, we will compare and contrast our experience in London focusing on specific interactions with the arts as well as observations of their daily lives. In sharing our observations we seek to illustrate how time abroad, no matter how long, is beneficial to students because they can witness snippets of a different culture.

Name: Ian Miller (BGSU)

Faculty Mentor: Louis Katzner

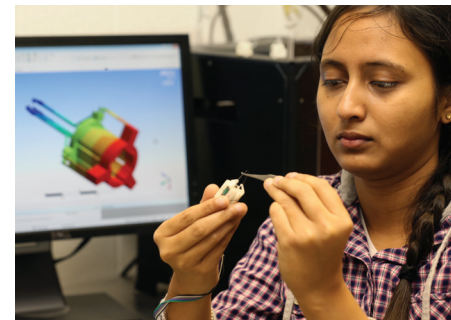
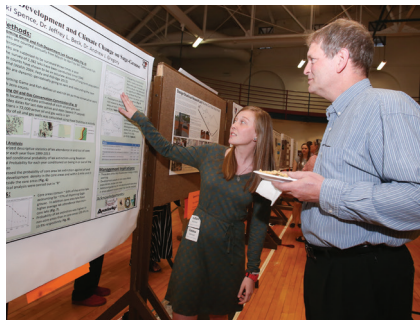
Department: Philosophy

Presentation Time: 12:35-12:55 p.m.

Location: Room 225

Propagating Identifiable Alien Natural Properties with Recombination

Modal realism is the view that all possible worlds are real worlds. A chief benefit of such a belief is the fully extensional and non-circular analysis of possibility it provides. When something is claimed to be possible, then modal realism holds it exists in some world. In order to ensure enough worlds exist to analyze all possibility claims, David Lewis fostered the principle of recombination. Recombination effectively generates worlds by rearranging duplicates of parts of the actual world in any quantity. Plausibly, there alien natural properties, properties which do not exist in the actual world. Recombination is unable to generate worlds with alien naturals since natural parts are not contingent on the arrangement of any other part. I advance a principle, the principle of unrestricted causal role-playing, that enables recombination to generate worlds with alien natural properties. I demonstrate how this may be done.



UNDERGRADUATE FACULTY MENTOR OF THE YEAR AWARD



Dr. Lisa Martin, Assistant Professor of Music Education in College of Musical Arts at Bowling Green State University

She holds a bachelor's degree in music education from the University of Illinois, and she earned both MME and Ph.D degrees from the University of Colorado Boulder.

Prior to her appointment at BGSU, she served as a graduate instructor at the University of Colorado. She also spent nine years teaching band and orchestra in Illinois and Colorado, specializing in instruction at the middle school level. In addition to her teaching responsibilities at BGSU, she coordinates the Music Plus outreach program with Toledo Public Schools, facilitates the Musicianship and Advanced Pedagogy program within the music education department, and runs the Middle School Academy Band outreach program, serving young musicians in northwest Ohio.

Dr. Martin's research interests include music teacher identity development, assessment practices in music education, and music teacher evaluation. She has presented locally, nationally, and internationally, publishing her work in the *Journal of Music Teacher Education*, *Bulletin of the Council for Research in Music Education*, *Journal of Historical Research in Music Education*, *Music Educators Journal*, and *Music Education Research*.

In addition, Dr. Martin has written regularly for *The Instrumentalist*. Dr. Martin is a member of the Pi Kappa Lambda National Music Honor Society, and she maintains an active membership in various professional organizations.

A few words from the student nomination of Dr. Martin:

"Dr. Lisa Martin is one of the most passionate, dedicated and hard-working people I have ever met. Throughout my research process she made herself available for me 24/7 even when she had an extremely busy schedule. She taught me so many things about conducting and analyzing research, since this past year was my first experience doing so. She also helped me refine and develop my ideas and was there to listen to me any time that I needed advice, professionally or personally.

"Dr. Martin truly gives her all to her students, and her students are very clearly her number 1 priority. She cares so much about all of her students and their well-being as well, and she played a big role in the creation of the College of Musical Arts Health and Wellness committee. There were a few points throughout my research where I was feeling very overwhelmed with all of the other responsibilities I had going on in my life, and she told me to come meet with her; she helped me work through some of the research to help relieve some of my responsibilities. She even went to go print out a final copy of my poster for me the day before the research symposium after we had found a mistake on my original poster and I did not have any time to get it re-printed that day.

"Dr. Martin's selflessness and commitment to her students and the field of performing arts health and music education are all qualities that not only make her an incredible teacher and mentor, but also an incredible person whom I am so thankful to have had the privilege working with."

POSTER PRESENTATIONS

AEROSPACE STUDIES

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
1	Amanda Eckel	David Garon	Bowling Green State University	Gender and Recruitment in University ROTC Programs

BIOLOGICAL SCIENCES

2	Elizabeth Harper	Julia Halo	Bowling Green State University	Identification of the Sequence Associated with Efficient SINEC Mobilization in Canids
3	Eleanor Behling	Ray Larsen	Bowling Green State University	Isolation of Burkholderia Bacteriophage
4	Kristina Gara	Ray Larsen	Bowling Green State University	Identification of the Colicin N binding domain of the TolA protein
5	Lauren Rosier	Ray Larsen	Bowling Green State University	Genome annotation of EMS9, A new T5 class virus with a unique host range
6	Kaleigh Obrock	Kevin McCluney	Bowling Green State University	Impacts of Temperature of Bumblebee (Bombus) Brood
7	Makayla Manes	Robert McKay	Bowling Green State University	Quantification of Viral Activity in Cyanobacterial Algal Blooms
8	Eric Huber	Jeffrey Miner	Bowling Green State University	Quantifying diet selectivity in larval Walleye (Sander vitreus) within Sandusky Bay, Ohio
9	Samantha Bihn	Matthew Partin	Bowling Green State University	Impact of fragging base on the growth of gorgonian corals
10	Kristina Flanigan	Shannon Pelini	Bowling Green State University	It's a bug's life-does size matter? An examination of invertebrate communities in relation to habitat size and availability
11	Julia Beyer	Vipa Phuntumart	Bowling Green State University	Lake-Dredged Material as a Soil Amendment for Soybean Production
12	Benjamin Caskey Morgan L Nance Sayantan Roy Choudhury Zhaohui Xu	Vipa Phuntumart	Bowling Green State University	Characterization of DNA methylase of Bacteriophage JoieB
13	Colton Flaherty Chloe Rose Koon Ashley Fransisca Wong Sayantan Roy Choudhury Zhaohui Xu	Vipa Phuntumart	Bowling Green State University	HNH Homing Endonuclease in Bacteriophage JoieB
14	Linnéa Forbes Edward Madden El-Farouk Rafaat Sayantan Roy Choudhury Zhaohui Xu	Vipa Phuntumart	Bowling Green State University	A Theoretical Evaluation of Bacteriophage JoieB in Phage Therapy as Treatment for Propionibacterium acnes (P. acnes) Infection
15	Morgan Nance Sayantan Roy Choudhury Zhaohui Xu	Vipa Phuntumart	Bowling Green State University	Lysogenic Phage as a Pathogenic Bacteria Regulator in Livestock

POSTER PRESENTATIONS

BIOLOGICAL SCIENCES (continued)

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
16	Lauren Tucker Rachel Bowling Shayla Marie Brooks Sayantan Roy Choudhury Zhaohui Xu	Vipaporn Phuntumart	Bowling Green State University	Bioinformatics analysis of transcription start sites of a bacteriophage JoieB
17	Landon Rohrer	Karen Sirum	Bowling Green State University	Undergraduate Research: Where's the Disconnect?
18	Caitlin Gold	Karen Sirum	Bowling Green State University	Transformation in Undergraduate Learning Assistants
19	Julia Horter	Hans Wildschutte	Bowling Green State University	Antagonistic Activity of Pseudomonas Strains Isolated from Netherland Water Samples Against Multi-Drug Resistant Pathogens
20	Emily Verbrugge	Hans Wildschutte	Bowling Green State University	Environmental Pseudomonas strains inhibit cystic fibrosis derived multi-drug resistant pathogens
21	James Easler	Qian Chen	The University of Toledo	Interactions between Striatin, a calmodulin-binding protein, and the Hippo tumor suppressor pathway
22	Saira Khan	Chen Qian	The University of Toledo	The Regulation of the Hippo Tumor Suppressor Pathway by a Type V Myosin Myo52 in Fission Yeast
23	Ryan Kalb	Deborah Vestal	The University of Toledo	Identifying the cellular location of hGBP-1 in Glioblastomas
24	Jessica Sucheck	Justin Pruneski	Heidelberg University	Using a Comparison Across the Spectrum of High School and Undergraduate Introductory Biology Courses to Inform Curriculum Changes

CHEMISTRY

25	Johnathon Durgala	Pavel Anzenbacher	Bowling Green State University	The Development of Intramolecular Indicator Displacement Assays for Determination of Enantiomeric Composition of Chiral Carboxylates
26	Quinn Eberhard	Pavel Anzenbacher	Bowling Green State University	Towards Multianalyte Sensing by Intramolecular Indicator Displacement Assay
27	Tyler Ruck	Massimo Olivucci	Bowling Green State University	A computational study of the primary photoisomerization event in the vision of ancestral archosaur
28	Kerri Bailey	Alexis Ostrowski	Bowling Green State University	Polysaccharide-Alginate Mixed Hydrogel Beads Uptake of Different Ions
29	Seth Smith	Jayaraman Sivaguru	Bowling Green State University	Synthesis and Evaluation of Bio-based Photoinitiators
30	Brandon Hoobler Mikayla Stanley Tracy Sullivan	Treasure Sucheck	Mercy College of Ohio	Synthesis and Analysis of Thiophene Derivatives as Potential Inhibitors of Mycobacterium tuberculosis Antigen 85c.
31	Sophia Slogar Elizabeth Massien Mayson Wray Annaliese Keiser Elaina Chicone	W. Robert Midden	Bowling Green State University	Native Plant Project

POSTER PRESENTATIONS

CHEMISTRY (continued)

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
32	Gabrielle White Sidney Bailey Chloey DiBartolo	W. Robert Midden	Bowling Green State University	Sustainability on BGSU's Campus Compared to Others
33	Caileen Williams Amber Hagey Emily Clark Stefani Salazar	W. Robert Midden	Bowling Green State University	The Water Usage on Campus
34	Clare Sunderman Autumn Kolk Caylin Curry D'Asia Daniels Lilly Cherri Tiffani Wilkins Abygail Collert Evan Lewis	Bethany Ash	Bowling Green State University	Photopolymer Treatment of Liquid CAFO Manure to Reduce Nutrient Transport

CHEMISTRY AND BIOCHEMISTRY

35	Meddie Demmings Justin Maxwell Allison Rabon Jared Doremus	Michael Young	The University of Toledo	Enhancing the Magnetic Properties of Iron-Based Spin Crossover Complexes Bearing Hydrogen Bonding Groups Through Hydrogen Bonding Solvents
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COMPUTER SCIENCE

36	Daniel George	Laura Leventhal	The University of Findlay	Exploring the Emotiv Gyroscope; Fitts Experiment
37	Aidan White Rose Connolly Ashley Gearheart	Jadwiga Carlson	Bowling Green State University	Code4HER

ECONOMICS

38	Emily Ryan	M Neil Browne	Bowling Green State University	Educational implications of phonotactic switching in Spanish/English dual speakers
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ENGLISH

39	Stephanie Werth	Heath Diehl	Bowling Green State University	Tokens of Privilege
40	Maggie Orosz	Abigail Cloud	Bowling Green State University	"Poppy: A Portrayal of Mental Illness Within Literature and Art"

HISTORY

41	Cory Sidle	Don Buerk	Defiance College	Why Did the Nazis Steal Art
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POSTER PRESENTATIONS

MATHEMATICS AND STATISTICS

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
42	Anthony Montanaro	James Albert	Bowling Green State University	Analyzing Football Play Success to Predict Future
43	Mary Solomon	James Albert	Bowling Green State University	Market Research on Student Concert Attendance at BGSU's College of Musical Arts

PHYSICS AND ASTRONOMY

44	Dustin Etts	Marco Nardone	Bowling Green State University	Advanced Optical Simulation of Photovoltaic Devices
45	Jordan Fox	Liangfeng Sun	Bowling Green State University	Tuning the Lateral Size of Colloidal PbS Nanosheets
46	Jordan Fox	Liangfeng Sun	Bowling Green State University	Tuning the Reaction Chemical Yield of Colloidal PbS Nanosheets
47	Avery Porco	Liangfeng Sun	Bowling Green State University	Improve the Optical Properties of PbS Nanosheets by Water and Reaction Temperature
48	Bryan Peck	Mellita Caragiu	Ohio Northern University	Theoretical background for experiments testing Bell's inequalities

POLITICAL SCIENCE

49	Laura Bozzelli	Andrew Kear	Bowling Green State University	Ontario's Green Energy Act of 2009: Policy Implementation Challenges and Limits to Renewable Energy Growth
50	McKayla Raines	Shannon Orr	Bowling Green State University	Street Children of Kinshasa
51	Adam Gaw	Shannon Orr	Bowling Green State University	A Case for Dropping the Cuban Embargo
52	Brian Harbert	Shannon Orr	Bowling Green State University	Tidal Energy
53	Jamal Husien	Shannon Orr	Bowling Green State University	Cruise Ship Tourism Environmental Impact
54	Olivia Martin	Shannon Orr	Bowling Green State University	The Effects of Sharking Finning
55	Kathryn McMillin	Shannon Orr	Bowling Green State University	Sustainability: Wealthy vs. Poor
56	Ashlyn Victoria	Shannon Orr	Bowling Green State University	Food Insecurity in the Bronx
57	Amelia Reed	Shannon Orr	Bowling Green State University	Sustainable Clean Energy Solutions
58	Stephanie Ross	Shannon Orr	Bowling Green State University	Best Sustainable Farming Practices
59	Hannah Cubberley	Melissa Miller	Bowling Green State University	Look at that face! Discerning Gendered Coverage of the 2016 Presidential Primaries

PSYCHOLOGY

60	Madison Harmon Matthew Schwarzman Emma Stewart	Howard Cromwell	Bowling Green State University	Human Incentive Contrast
61	Helena Pittroff lo Tejada-Salgado Julia Farrell Mason Dicke	Dara Musher-Eizenman	Bowling Green State University	Attitudes Toward Drug Abuse Based on Race, Weight Class, and Socioeconomic Status
62	Miranda Frank	Dara Musher-Eizenman	Bowling Green State University	Living in a food desert: The association between food security, food access, and maternal self-efficacy

POSTER PRESENTATIONS

PSYCHOLOGY (continued)

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
63	Meghan Vogt	Jari Willing	Bowling Green State University	Effects of Environmental Estrogen on Brain Development and Behavior
64	Melissa Miller	Verner Bingman	Bowling Green State University	Homing on a Vertical Surface in Whip Spiders (Amblypygids)
65	Mariah Waaland	Sherona Garrett-Ruffin	Bowling Green State University	Exploring relationships between electroencephalogram (EEG) theta/beta ratios and empathy

SCHOOL OF ART

66	Kit Frye Alison Benbow	Leigh-Ann Pahapill	Bowling Green State University	Plastic Jelly: An Exploration of Single-Use Plastics on Marine Life
67	Alexis Rubertino	Leigh-Ann Pahapill	Bowling Green State University	Being A Practicing Artist: Borders and Identity

SCHOOL OF ART - ART EDUCATION

68	Jamie Feyes	Mousumi De	Bowling Green State University	Women In Gaming
69	Maya Jordan	Mousumi De	Bowling Green State University	Understanding and Promoting the Use of Technology Among Female Pre-Service Teachers in the Field of Art Education
70	Allison Howard	Mousumi De	Bowling Green State University	Developing an Art Lesson for Students with Autism
71	Madeleine Burland	Mousumi De	Bowling Green State University	What it Means to be Me: A Look Into Asexual Representation and Origins in Media Today

SCHOOL OF ART - ART HISTORY

72	Micaela Deogracias	Ruthy Light	Bowling Green State University	STEAM vs STEM in Museum Education Practices: A Case Study and Program Proposal for Monticello
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SCHOOL OF ART - CERAMICS

73	Drake Gerber	John Balistreri	Bowling Green State University	Glaze Testing For Mixed Media Sculpture
74	Cole Worden	John Balistreri	Bowling Green State University	Slip Casting Clay Bodies for Sculptural Applications
75	Alex Carmen	John Balistreri	Bowling Green State University	Exploring large scale ceramic sculpture: materials, process, and logistics
76	Ben Myers	Andrew Gilliatt	Bowling Green State University	Decaying Ceramic Pieces

SCHOOL OF ART - DIGITAL ARTS

77	Chase Fabianich Deanna Granata Willow Socha Rachel Sykes Dietrick Wiles	Bonnie Mitchell	Bowling Green State University	SIGGRAPH and ISEA Archive Research & Development: A Creative and Innovative Approach to Historical Digital Art Documentation
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POSTER PRESENTATIONS

SCHOOL OF ART - DRAWING & PAINTING

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
78	Leeann Ream Truman Chambers Kim Tumblin Christin Kern Kelli Mckee	Dennis Wojtkiewicz	Bowling Green State University	We, Embodied

SCHOOL OF ART - GRAPHIC DESIGN

79	Morgan Gale	Liz Bayan	Bowling Green State University	False Advertising: A Look at Crisis Pregnancy Centers
80	Nicole Headlam	Liz Bayan	Bowling Green State University	Unforgotten Diamonds
81	Emily Feaster	Liz Bayan	Bowling Green State University	Into The Depths
82	Ashley Jagielski	Lori Young	Bowling Green State University	Dual Identities

SCHOOL OF ART - JEWELRY AND METALS

83	Kathryn Clapsaddle	Tom Muir	Bowling Green State University	Confronting Social Issues Through Art
84	Cessna Manalili	Tom Muir	Bowling Green State University	Paradise Tossed
85	Kay Kleingers	Marissa Saneholtz	Bowling Green State University	InTEAmacy: Tea Blends and Personal Narrative
86	Hannah Zitzelberger	Marissa Saneholtz	Bowling Green State University	Elevating Insects through Plique-à-Jour Enameling
87	Kelly Alge	Tom Muir	Bowling Green State University	Discovering Possibilities: Industrial Graphite Spray Applications in Vitreous Enamel Art

SCHOOL OF ART - PAINTING

88	Leeann Ream	Brandon Briggs	Bowling Green State University	Meditations: Observational Study of the Figure
89	Truman Chambers Leeann Ream Michelle Whitmer Trevor Goebel Lauren Holcomb Christin Kern	Mille Guldbek	Bowling Green State University	Harbor

SCHOOL OF ART - PRINTMAKING

90	Gyona Rice	Janet Ballweg	Bowling Green State University	Exploring My Identity as a Black Woman
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SCHOOL OF ART - SCULPTURE

91	Bradford Simpson	Shawn Morin	Bowling Green State University	Luthier Bass Project
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SCHOOL OF ARTS - GLASS

92	Keegan O'Brien	Joel O'Dorisio	Bowling Green State University	Replicating Sea life in Glass
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POSTER PRESENTATIONS

SCHOOL OF CULTURAL & CRITICAL STUDIES - AMERICAN CULTURE STUDIES

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
93	Jo Wilson	Rebecca Kinney	Bowling Green State University	Analyzing Perceived Spatial Safety and Ability for Outness among BGSU Queer Students

SCHOOL OF EARTH, ENVIRONMENT AND SOCIETY

94	Madison Brown	Angélica Vázquez-Ortega	Bowling Green State University	Distribution of nutrients in agricultural soils subjected to various degrees of tillage in Ohio
95	Kaitlyn Busch	John Farver	Bowling Green State University	Strontium uptake into otoliths and the effect of fish species and otolith form.
96	Alyssa Reinhardt	John Farver	Bowling Green State University	Copper Levels in Boat Wash Wastewaters from Ohio Marinas
97	Gabrielle Ysassi	Andrew Gregory	Bowling Green State University	Validating a Lake Erie Watershed Kirtland's (Clonophis Kirtlandii) Snake Distribution Model using eDNA Surveying
98	Adam Kubicki	Andrew Gregory	Bowling Green State University	The Effects of Remnant Natural Area Fragments on Arthropod Biodiversity
99	Cody Schatz	Andrew Gregory	Bowling Green State University	Modeling Bat Populations in Wood County, Ohio

SCHOOL OF MEDIA & COMMUNICATION - JOURNALISM AND PUBLIC RELATIONS

100	Sophia Walcher	Kelly Taylor	Bowling Green State University	Navajo Voices
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SOCIOLOGY

101	Taylor Tolles	Thomas Mowen	Bowling Green State University	Why Does Military Service Encourage Deviance? Applying General Strain Theory to The United States Military
102	Clairessa Morrow	Margaret Weinberger	Bowling Green State University	An Exploration of Artists Spaces in Greater Boston
103	Adam Ferber	Kara Joyner	Bowling Green State University	Who is Head of Household in Intermarriages?
104	Seth Watts	Thomas Mowen	Bowling Green State University	The Impact of School Resource Officers on School Shootings

THEATRE AND FILM

105	Tay Sauer	Hannah Mueller-Miller	Bowling Green State University	Censorship of Feminist Film
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WORLD LANGUAGES AND CULTURES/MATHEMATICS

106	Melody Freeland	Cynthia Ducar & Daria Filippova	Bowling Green State University	Closing the Gap: Experimenting with Manipulatives to Improve ELL Math Achievement
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ENGLISH

107	Preston Smith	Abigail Cloud	Bowling Green State University	Reimagined: An Analysis and Retelling of Hans Christian Andersen's Works
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POSTER PRESENTATIONS

MATHEMATICS AND STATISTICS

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
108	Annaliese Keiser	Joan Remski	University of Michigan-Dearborn	Efficiency of a Moving Mesh System with a Curvature-Type Monitor and an Application to Burgers' Equation

MARKETING

109	Kenzie Carles Alexandria Thompson Matthew Kramer	Mohammadali Zolfagharian	Bowling Green State University	e-Cigarettes: Combating or Compounding Consumer Addiction?
110	Adam Imbrigiotta Blake Cingle Jacob Wietrzykowski Paul Keefer Kaersten Haverkos	Mohammadali Zolfagharian	Bowling Green State University	The Overlooked Effects of "Zero-Calorie" Marketing and Suggested Solutions
111	Mary Kate Kaufman Kayli Duncan McKenzie Robson Matthew Goethals Jacob Shandle	Mohammadali Zolfagharian	Bowling Green State University	Uncovered: The Truth about Greenwashing in the Cosmetic Industry
112	Jacob Maley Alexander Sabo Victoria Miller Reghan Winkler	Mohammadali Zolfagharian	Bowling Green State University	Portrayal of Alcohol Consumption as Part of College Student Lifestyle: Irresponsible Advertising and Recommended Remedies
113	Brendan Moore Austin Brown Brandon Luthman Paige Thomas	Mohammadali Zolfagharian	Bowling Green State University	Portrayal of Alcohol Consumption as Part of College Student Lifestyle: Irresponsible Advertising and Recommended Remedies
114	Allison Neary Robert Bierman Hunter Traugh Vlad Sedler Christine Hisel	Mohammadali Zolfagharian	Bowling Green State University	The Untold Truth Behind Instagram Influencers: The Case of "Fit Tea"
115	Parker Stierwalt Malik Devese Rachel Stone Caterion Thompson Traig Traylor	Mohammadali Zolfagharian	Bowling Green State University	Compulsive Gambling: How to Fill the Void in Consumer Protection Beyond the Regulatory Framework
116	Marharita-Sophia Tavpash Laine Laudick Wen-Tung Wu Samuel Musgrave Emily Gunnerman	Mohammadali Zolfagharian	Bowling Green State University	Loopholes in Personal Health Insurance and Recommended Solutions

POSTER PRESENTATIONS

SCHOOL OF FAMILY AND CONSUMER SCIENCES - HUMAN DEVELOPMENT AND FAMILY STUDIES

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
117	Kayla DeMuth Justin Newcomb	Laura Landry-Meyer	Bowling Green State University	Intercultural Wonderment
118	Kayla Adamic	Laura Landry-Meyer	Bowling Green State University	Listening: Skill Enhancement

SCHOOL OF TEACHING AND LEARNING

119	Julianna Cajka	Sheryl Krotzer	Bowling Green State University	Engage, Inspire, Connect: Using Stories to Teach
120	Grace Mutti	Joanna Weaver	Bowling Green State University	The Impact of High Interest Materials on Incarcerated Youth

COMMUNICATION SCIENCES AND DISORDERS

121	Jackalyn Siebenaler	Brent Archer	Bowling Green State University	The Write Stuff: A preliminary study of key wording in facilitated conversation groups for people with aphasia
122	Anna Marie Sulminski Madison Duling Stephanie Koch Katie Hartsel	Brent Archer	Bowling Green State University	Developing Discourse Structure Analysis for Conversations Between People With Aphasia
123	Elaina Eskins	Timothy Brackenbury	Bowling Green State University	Screening Measures for Speech Sound Disorders: A bit of everything or a lot of something
124	Breawna Heal	Brent Archer	Bowling Green State University	Word error and word frequency correlation in Broca's aphasia
125	Ebere Okoro	Ronald Scherer	Bowling Green State University	Vocal Stability of a Female Contestant on America's Got Talent
126	Larisa Kalinowski	Jason Whitfield	Bowling Green State University	Investigation of Speech Motor Sequence Learning and Chunking: An Application to Parkinson Disease

HUMAN SERVICES - CRIMINAL JUSTICE

127	Megan Swinehart	Philip Stinson	Bowling Green State University	On-Duty Police Shootings: Officers Charged with Murder or Manslaughter, 2005-2018
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HUMAN SERVICES - GERONTOLOGY

128	Hayley Landers Meagan Lonsway	Cynthia Spitler	Bowling Green State University	Occupational Therapy Success in Assisted Living Facilities
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POSTER PRESENTATIONS

HUMAN SERVICES - SOCIAL WORK

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
129	Megan Lucchese Torinne Alexander Hope Myers	HeeSoon Lee	Bowling Green State University	Prominence and trauma and PTSD in those who have Intellectual Disability and Importance of Caretaking
130	Bethany Horner Brianna Cordle Victoria Sooy	Hee Soon Lee	Bowling Green State University	Positive Effects of Family Focused Rehabilitation Programs on the Early Release and Recidivism for Men (ages 19-39) in Prison.
131	Torinne Alexander Hope Myers Megan Lucchese	Hee Soon Lee	Bowling Green State University	Prominence of Trauma in those who have Intellectual Disability and Importance of Adequate Caretaking
132	Taylor Bishop Tamia Monroe	Hee Soon Lee	Bowling Green State University	Caregiving Stress: impacts on Depression among Caregivers who Care for Alzheimer's and Dementia
133	Susan Black Gabby Pace Nick Zayas	HeeSoon Lee	Bowling Green State University	Crime and Climate in Bowling Green
134	Julia Bressler Katie Wagner Bailey Hollerbach	Hee Soon Lee	Bowling Green State University	College Student's Perception about Likelihood of Developing Depression in the Foster Care System
145	Holly Huffman Daisy Delapaz	Hee Soon Lee	Bowling Green State University	"Perception about Postmenopausal Hormone Therapy and Alzheimer's Disease Risk among Premenopausal Women"
136	Joshua Johnson Emilie Schlissel Emma Howard	Hee Soon Lee	Bowling Green State University	"The Impact Peer Groups have on a Juveniles Likelihood of Committing Theft"
137	Emily Koloszar Damia Davis Lydia McGovern	Hee Soon Lee	Bowling Green State University	The Effectiveness of Coping Strategies For Anxiety Amongst College Students
138	Meagan Lonsway Hayley Landers MaKenna Schnipke	Hee Soon Lee	Bowling Green State University	The Effects of Anti-Vaccination in Children
139	Gabrielle Matlack Tyler Tudor Makiah Tillman	Hee Soon Lee	Bowling Green State University	Impact of Physical Activity on Wellness of Children with Down Syndrome
140	Makenna Schnipke Meagan Lonsway Hayley Landers	Hee Soon Lee	Bowling Green State University	The Effects of Anti-Vaccination in Children
141	Matt Simons Nathan Jacobs	Hee Soon Lee	Bowling Green State University	Alcohol Consumption and it's impact on college student academics
142	Curtis Sluterbeck Quinton Morckel Reallity Doss	Hee Soon Lee	Bowling Green State University	How Political Views Shape Opinions On Law Enforcement Officers among College Students

POSTER PRESENTATIONS

HUMAN SERVICES - SOCIAL WORK (continued)

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
143	Rachel Suzor Kali Pugh Amanda Burtch	Hee Soon Lee	Bowling Green State University	The Effects of PTSD on Family and Social Relationships Among Post-Deployed Men
144	Lauren Tait Lexie Fretz Jacob Williamson	Hee Soon Lee	Bowling Green State University	How the impact of age and time incarcerated affects the suicide rate of male death row inmates?: Voice from Criminal Justice Students and Correctional Officers Correctional Officers
145	Michael Yowler Christian Lydon Brayton Straley	Hee Soon Lee	Bowling Green State University	Family Socioeconomic Status and its Influence on Juvenile Delinquency
146	Taylre Lehmann Chloe Alexis	Hee Soon Lee	Bowling Green State University	Fear of Crime and the Media: What are Students Afraid of?
147	Sarah Hinkel Andrew Milne Adriana Gil	Hee Soon Lee	Bowling Green State University	Social Media Effect on the Fear of Crime in College Students
148	Reed Kross David Dunnett Chase Lorenzo	Hee Soon Lee	Bowling Green State University	Effects of PTSD, Depression, and Substance Abuse on Suicide Rates Among Police Officers
149	Jamie Wilson Makenzie Hoffman Lavelle Lee	Hee Soon Lee	Bowling Green State University	The Long-Term Impact of Experiences in the Foster Care System on Mental Health Among People Who have been Through the System

PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

150	Paige Grube Carlee Vaughn	Caren Steinmiller	The University of Toledo	Student Perception of Substance Abuse in UT CPPS Freshmen
151	Carlee Vaughn Paige Grube	Caren Steinmiller	The University of Toledo	Evaluation of Substance Abuse Knowledge in UT CPPS Freshmen

PHARMACY PRACTICE

152	Allie Schaefer Laura Lam-Phaure Katie Wolf	Gabriella Baki	The University of Toledo	Effect of emollients on the in vitro SPF and broad spectrum protection of organic UV filters
153	Natalie Zael	Gabriella Baki	The University of Toledo	Formulation and Testing of Coconut Oil-Based Skin Moisturizers

PUBLIC AND ALLIED HEALTH - DIETETICS

154	Brittany Kralik	Jonathan Kershaw	Bowling Green State University	Sensory Evaluation of Aquaponic Tomatoes Versus Conventionally Grown Tomatoes
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POSTER PRESENTATIONS

PUBLIC AND ALLIED HEALTH - FOOD AND NUTRITION

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
155	April Allen	Carrie Hamady	Bowling Green State University	Examination of Outcomes of a Nutrition Intervention Program Aimed to Benefit College Students
156	Jadin Fields	Kerri Knippen	Bowling Green State University	Exploratory Study: Parental Dietary Intake and Mealtime Feeding Behaviors Associated with Autism Spectrum Disorder
157	Hannah Koncelik	Kerri Knippen	Bowling Green State University	Numeracy and Gestational Diabetes: Patient Perspectives
158	Cary Flanders Rylee Wheaton	Mary-Jon Ludy	Bowling Green State University	Cardiovascular Disease Risk Assessment of First Year College Students at BGSU
159	Megan Larson	Mary-Jon Ludy	Bowling Green State University	Comparison of Body Composition Assessment Techniques in Women's Collegiate and Masters Level Swimmers
160	Maggie Oleksiak Paityn Dishop Lauren Scherer	Mary-Jon Ludy	Bowling Green State University	Comparing On-Campus Students' Diets versus Off-Campus Students' Diets in Regard to the USDA Dietary Guidelines

PUBLIC AND ALLIED HEALTH - PUBLIC HEALTH

161	Brooklyn Proudlock	Lauren Maziarz	Bowling Green State University	Sexual Risk Behavior and Online Dating Apps: Perceptions of Undergraduate Students at BGSU
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MUSIC EDUCATION

162	Brandon Alt	Michael King	Bowling Green State University	Maximizing the Return on Investment for College Marching Bands
163	Steven DeAmon	Michael King	Bowling Green State University	Geographic Analysis of Marching Band Culture (College and High School Ensembles)

MUSICOLOGY/COMPOSITION/THEORY

164	Lindsay Watkins	Ryan Ebright	Bowling Green State University	From Hobo to Fellow: Institutionalizing Harry Partch and His Music
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ARCHITECTURE AND ENVIRONMENTAL DESIGN

165	Husam Alminawy	Sara Khorshidifard	Bowling Green State University	Graphical Architectural Representation
166	Morgan Cleek	Sara Khorshidifard	Bowling Green State University	Way Finding in Architecture: A Focused Study on Airports
167	Taylor Houvig	Sara Khorshidifard	Bowling Green State University	Blurring Boundaries
168	Betty Krodel	Sara Khorshidifard	Bowling Green State University	Challenges to Modern Usage and Green Technology Implementation in Older Housing

POSTER PRESENTATIONS

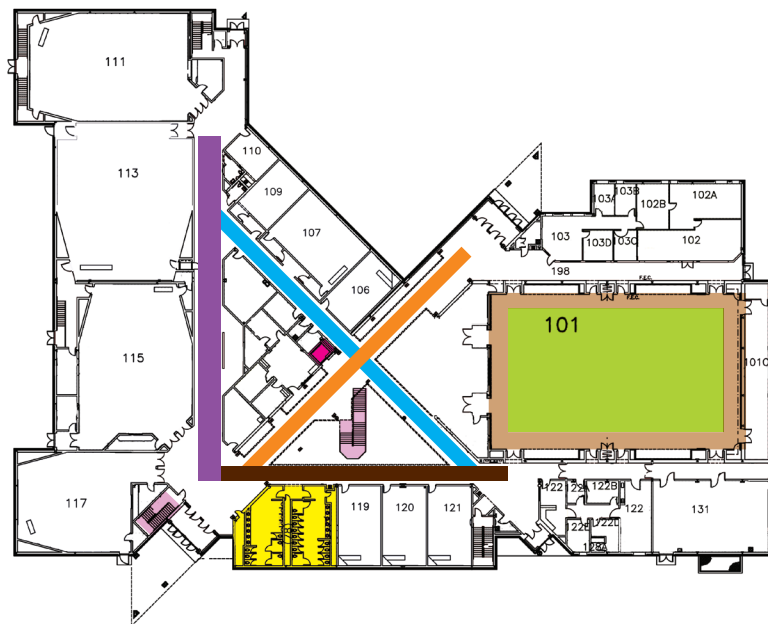
ENGINEERING TECHNOLOGIES

Poster #	Presenters	Faculty Mentor	Institution	Title of Presentation
169	Long Duong Tearence Lane Maurice Adika Amandy Ayima Akanpiem Jenelysc Martinez Paez Matt Nelson	Resmi Krishnankuttyrema	Bowling Green State University	Designing and prototyping an autonomous car

VISUAL COMMUNICATIONS AND TECHNOLOGY EDUCATION

170	Andrea Goetting	Hank Blumenthal	Bowling Green State University	A Survey of Augmented and Virtual Reality in Museums
171	Maxwell Brickner	Jerry Schnepf	Bowling Green State University	Exploring different modalities for learning computer programming
172	Chloe Pearson	Jerry Schnepf	Bowling Green State University	Fuel for Success

OLSCAMP HALL MAP-FIRST FLOOR



POSTERS 1-25
POSTERS 26-50
POSTERS 51-75
POSTERS 76-100
POSTERS 101-175
ROOM
ELEVATOR
RESTROOMS

OLSCAMP HALL MAP-SECOND FLOOR



ROOMS
STAIRS
ELEVATOR
RESTROOMS

GLASS AWARD

Three students giving an oral presentation and three students presenting posters will be awarded the CURS glass award designed by BGSU faculty member and glass-blower extraordinaire Joel O'Doriso. This stunning award symbolizes the student (sphere) being embraced by BGSU (orang and brown falcon talons) with the award as a whole also resembling an abstract eye, symbolizing knowledge. Posters and presentations will be judged by faculty volunteers and the winners will be announced several days after the symposium event.



Pictured left to right: CURS Director Cordula Mora, Brad Holmes, Matthew Franks, Provost John Fischer, Alyssa Hulthen, Rebecca Ebert, Francesca Leo, Dr. Virginia Dubasik, and doctoral student Mikhail Shilov, accepting the award on behalf of Noah Dunn, whom he mentored.



THANK YOU

On behalf of the Center for Undergraduate Research and Scholarship (CURS) and BGSU, I would like to recognize the people whose support has been crucial to the success of our students and this symposium. Thank you to the faculty mentors and research advisors for taking the time to assist these students in becoming the future leaders and scholars in their respective fields. Your guidance is integral to the research process and completion of the project. Thank you to the families and friends of the students we recognized today for building a foundation that encourages academic challenge and engagement, cheering them on throughout the process, and attending the symposium today. Finally thank you to the students for sharing their work with us this morning. It is truly incredible to see what our students are capable of accomplishing and is a testament to the value of a BGSU education.

Dr. Cordula Mora, *Director of CURS*