

THE 10TH ANNUAL  
**UNDERGRADUATE RESEARCH  
AND CREATIVITY SYMPOSIUM**



 **METHODIST**  
UNIVERSITY

## TABLE OF CONTENTS

<u>Agenda.....</u>	<u>3</u>
<u>Week Agenda.....</u>	<u>3</u>
<u>CRC Symposium Agenda .....</u>	<u>3</u>
<u>Presentation Schedule .....</u>	<u>4</u>
<u>Oral Presentations .....</u>	<u>4</u>
<u>Morning Session .....</u>	<u>4</u>
<u>Afternoon Session.....</u>	<u>5</u>
<u>Poster Session.....</u>	<u>6</u>
<u>Abstracts and Presenters .....</u>	<u>7</u>
<u>Nursing Research and Community Symposium Presentations.....</u>	<u>7</u>
<u>Morning Session.....</u>	<u>9</u>
<u>Afternoon Session .....</u>	<u>13</u>
<u>Faculty Symposium Presentations .....</u>	<u>17</u>
<u>CRC Update.....</u>	<u>19</u>

### MISSION STATEMENT OF THE METHODIST UNIVERSITY CENTER FOR RESEARCH AND CREATIVITY

The mission of the Methodist University Center for Research and Creativity is to establish educational opportunities that are collaborative and inquiry-based with the intention that every Methodist University student has access to exploratory learning across the curriculum.

“Faculty research and creativity are at the heart of the academic endeavor. Not only do these activities help to create new knowledge and new experience, but they add tremendously to teaching and learning. This work models for students the academic rigor and care involved in knowledge production, engages students in the process itself, and helps students become more critical information consumers for the rest of their lives — a vital skill in today’s environment.”

– Dr. Stanley T. Wearden  
President



## WEEK AGENDA | APRIL 5-9, 2021

### Monday | April 5

3-5 p.m. Fourth Annual Nursing Research and Community Symposium Nursing Building

### Wednesday | April 7

9 a.m.-3 p.m. 10th Annual Center for Research and Creativity Symposium See Program for Zoom Information

### Friday | April 9

11-11:50 a.m. Faculty Symposium Presentations See Program for Zoom Information



## CRC SYMPOSIUM AGENDA | APRIL 7, 2021

Time	Event	Location
9-11 a.m.	Morning Session	See Program for Zoom Information
11 a.m.-1 p.m.	Lunch Break	
1-3 p.m.	Afternoon Session	See Program for Zoom Information
2-3:15 p.m.	Poster Session*	Bell Tower in Quad (Riddle Center in case of inclement weather)

*\* Posters will be displayed around the Bell Tower in the Quad beginning at 9 a.m., or in the Riddle Center in the case of inclement weather. Students will be available for questions during the Poster Session.*



## MORNING SESSION

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

**POLITICAL SCIENCE: CONFIDENCE IN GOVERNMENT AND TAXING THE RICH | ALLISON 121**

9-9:20 a.m.	Confidence in U.S. Government: An Analysis of Survey Data	Carollyn Sierra
9:20-9:40 a.m.	Taxing the Rich in Sweden: An Analysis of Public Opinion Data	Edona Sefa
9:40-10 a.m.	World's Inequality: Taxing the Top 1%	Mujahed Aghbar
10-11 a.m.	Q&A	

**ENGINEERING: ADMISSIONS AND KINEMATICS | HENDRICKS 122**

9-9:20 a.m.	Application of Lean to Improve Admissions and Clearance Processes at Methodist University	Jaquez Dedeaux, Patrick Gaddy, Hailey Carlyle
9:20-9:40 a.m.	Use of Knee Angle Sensor to Determine Vertical Jump Height and Total Power In-Situ	Aiden Sherry, Jacob Lowe
9:40-11 a.m.	Q&A	

**PSYCHOLOGY: STRESS, CONFORMITY, AND ZOOM LEARNING | HENDRICKS 222**

9-9:20 a.m.	Social Support as a Buffer to Depression and Anxiety	Tevin Hicks, Nicolas Schuler, Chloe Backus
9:20-9:40 a.m.	Conformity in the Online Environment	Bryana Dunnigan, Kayla Gilbert, Jerald Simms, Erin Holland
9:40-10 a.m.	The Impact of Distraction on Online Learning Implemented Through Zoom as a Result of COVID-19	Logan Taylor, Gabriella Torgeson, Jacqueline Young
10-11 a.m.	Q&A	

**INTERDISCIPLINARY: ETHICS AND POWER IN ART AND LITERATURE | YARBOROUGH AUDITORIUM**

9-9:20 a.m.	Ethical Design in the Age of Consumerism	Karen Britton
9:20-9:40 a.m.	The Common Core State Standard Initiative	Kesimyy Martinez
9:40-10 a.m.	Sign Systems in Literature: Struggles for Power and Identity in Story	Maria Choi
10-11 a.m.	Q&A	

## AFTERNOON SESSION

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

**INTERDISCIPLINARY: BETWEEN WAR AND PEACE | ALLISON 121**

1-1:20 p.m.	<i>The Liberator's</i> Presentation of Slavery and the South	Hallie Smith
1:20-1:40 p.m.	Climate Change and International Security	Mujahed Aghbar
1:40-3 p.m.	Q&A	

**SPORT PSYCHOLOGY: DOGS AND RECIDIVISM | HENDRICKS 122**

1-1:20 p.m.	The Impact of Dogs on Collegiate Lacrosse Players' Receptivity to and Learning from Sport Psychology Sessions: A Pilot Study	Aiden Sherry
1:20-1:40 p.m.	Mental and Physical Toughness Bootcamp: Using Sport Psychology to Decrease Recidivism	Sydney Bird
1:40-3 p.m.	Q&A	

**MUSIC: HYMNS AND THE NATURAL WORLD | NURSING 103**

1-1:20 p.m.	Unity of Word and Music in Martin Luther's Chorales	Alyssa Hall
1:20-1:40 p.m.	Is Music Natural?	Elizabeth Cox
1:40-3 p.m.	Q&A	

**ENGLISH: SENIOR SEMINAR IN LITERARY STUDIES | YARBOROUGH AUDITORIUM**

1-1:20 p.m.	Out of This World: A Transformed Sense of Self Through Encountering and Becoming Other in Portal Fantasy	Maria Choi
1:20-1:40 p.m.	The Real Monsters	Franklin Pennington
1:40-3 p.m.	Q&A	



POSTER SESSION | 2-3:15 P.M.

Posters will be displayed around the Bell Tower in the Quad beginning at 9 a.m., or in the Riddle Center in the case of inclement weather. Students will be available for questions during the Poster Session.

Undergraduate Posters

- Improvement of Admissions and Clearance Processes at Methodist University .....Jaquez Dedeaux, Patrick Gaddy, Hailey Carlyle
- The Problem of Not Enough Outdoor Space in the MU Community in a Physically Distanced Reality.....Ian Mitchell, Kimberly Christon, Leonardo J. Rodriguez Vargas, Loyiso Matiwane
- Project Expansion for New Gathering and Study Spaces ..... Brianna Smith, Jalen Rushin, Christian Chavula, Na-Ubangiji Ali Dawood
- Revitalizing the MU Forest.....Kampadilemba Larry Nicolas Onadja, Duncan Harling, Albert Williams, Kolby Galloway
- Shot Speed and Accuracy for Men’s Lacrosse Overhead, Sidearm, and Underhand Shots .....Hunter Vaughan, Dakota Gross
- Student Indoor Gathering Spaces .....Ryan Martin, Jacob Bruhmuller, Jaedon Hill
- Use of Knee Angle Sensor to Determine Vertical Jump Height and Total Power In-Situ.....Aiden Sherry, Jacob Lowe



## FOURTH ANNUAL NURSING RESEARCH AND COMMUNITY SYMPOSIUM APRIL 5 | 3-5 P.M. | NURSING BUILDING

### THE IMPACT OF DELIVERY MODE ON THE MATERNAL-CHILD BOND

**Blair Bowden**

Bonding is a psychological process that involves the establishment of an effective attachment system. This progress begins during pregnancy and can be predictive of the postpartum bond. The mode of delivery can impact this process, with cesarean sections having a negative impact compared to vaginal births.

### THE EFFECTS OF EXTRINSIC REWARDS ON DIABETES MELLITUS PATIENTS' REGIME COMPLIANCE AND HEMOGLOBIN A1C LEVELS

**Courtney Downs**

Type 2 diabetes mellitus affects approximately 34 million people in the United States. Management of the disease required a lifestyle change that many patients find difficult to make. Proper incentivization could help patients make and maintain lifestyle changes at the beginning of their disease process resulting in better disease management and fewer complications.

### THE EFFECT OF GROUP PRENATAL CARE ON MATERNAL MORTALITY IN PREGNANT AFRICAN-AMERICAN WOMEN

**Kashondra D. Gray**

Group prenatal care is an increasingly popular system of delivering prenatal care that focuses on assessment, education, and support. It encourages women to be active participants in their care while enabling women to support one another. This study will measure the effect of group prenatal care in reducing maternal mortality in African-American women.

### UNIVERSAL APPLICATION OF THE MAPMISS AT TRIAGE: AN INTERVENTION TO IMPROVE OUTCOMES IN WOMEN WITH SUSPECTED MYOCARDIAL INFARCTION

**Liliana Henry**

While often viewed as a "men's health" issue, women experience higher rates of mortality and morbidity following acute myocardial infarction than men. This study attempts to facilitate providers' prompt recognition and adherence to recommended treatments in an effort to improve outcomes in women who present to the hospital emergency department with acute myocardial infarction.

### THE EFFECT OF ADVERSE CHILDHOOD EXPERIENCES ON THE DEVELOPMENT OF MENTAL ILLNESS

**Chloe Hespeler**

Adverse Childhood Experiences (ACEs), are traumatic events occurring in the lives of children before the age of 18. There are many studies that examine the effect of ACEs on the

development of mental illness later in life. One aspect of ACEs that has not yet been well studied, is the impact of the severity of the ACE on the development of mental illness. This study examines the severity of the ACE and any correlation with the development of mental illness.

### MEN IN NURSING: EXPLORING HIGH SCHOOL STUDENTS' PERCEPTIONS OF NURSING

**Luke Hinlicky**

Male nurses make up less than 10% of the nursing workforce. Recent progression of societal norms has brought greater sexual diversity within other health care professions yet has had little impact on nursing as a whole. Exploring the perceptions of high school students will reveal vital information that could lead to interventions for change.

### DEFEATING THE TRIAD OF DEATH: CALCIUM SUPPLEMENTATION IN MASSIVE TRANSFUSION PROTOCOL

**Jessica Koogle**

Calcium affects the three corners of the triad of death: acidosis, hypothermia, and coagulopathy. This study investigates the effect of calcium supplementation during massive transfusion protocols at improving patient outcomes and decreasing mortality occurring within a week of the trauma.

### RECOGNITION OF PLACENTAL ABRUPTIONS IN MOTOR VEHICLE COLLISIONS

**Andrew Lester**

Placental abruptions are an emergent complication of pregnancies that can occur due to the forces of motor vehicle collisions. Current recognition of placental abruptions involves an array of tests whose sensitivity can leave abruptions undetected. Improved recognition of placental abruptions is necessary.

### CULTURAL COMPETENCY TRAINING AND ITS EFFECTS ON HEALTH DISPARITIES

**Rudi M. Mack**

Cultural competency has been identified as an important aspect of the nursing profession. As the population becomes more diverse the need for culturally competent nurses increases. There is a question whether increasing cultural competence among nurses and other health care professionals will help reduce the disparities that exist within health care.

### MINDFULNESS INTERVENTIONS AND TYPE 2 DIABETES: COULD IT IMPROVE HEALTH OUTCOMES?

**Jessica Okorieocha**

There are many benefits to mindfulness practices including reducing stress. Managing diabetes can be a problem for those



**FOURTH ANNUAL NURSING RESEARCH AND COMMUNITY SYMPOSIUM**  
**APRIL 5 | 3-5 P.M. | NURSING BUILDING**

having difficulty coping with stress. Mindfulness-based interventions are analyzed as an aide to managing glycemic control in adults living with Type 2 diabetes.

**OLDER KOREAN IMMIGRANTS AND THE LIVED EXPERIENCE DURING THE HOSPITAL STAY**

**Yoo Jin Park**

Korean Americans with limited English proficiency (LEP) experience higher levels of stress after immigration to the United States. Studies have shown that older adults are more prone to developing mental health disorders, and LEP results in poor quality of care during the hospital stay. Currently, there is a lack of research regarding the lived experience of older Korean immigrants during the hospital stay. This study will explore the lived experience of older Korean immigrants' level of anxiety during the hospital stay.

**THE EFFECT OF DIET ON SYMPTOMS OF PSORIATIC ARTHRITIS**

**Reagan Parks**

Psoriatic arthritis is an immune system and inflammatory response and it affects some people who have the skin condition called psoriasis. Psoriasis is a skin disease that causes itchy, flaky, and reddened skin patches usually found on the trunk, scalp, elbows, and knees. Studies have shown that these inflammatory responses have been reduced in size and outbreaks through the use of reducing triggers, such as anti-inflammatory diets.

**DETERMINANTS OF OPIOID MISUSE IN WOMEN**

**Breonna Roach**

The misuse of opioids has been an undeniable epidemic in the United States for over twenty years, one that has been exacerbated by health care professionals. This issue particularly affects women by leading to a cascade of determinants such as unintended pregnancies, sexual violence, sexually transmitted diseases, and overdose.

**ADHD TREATMENTS AND THEIR EFFECTS ON SUBSTANCE USE DISORDERS**

**Anna Walker**

Pharmacological treatment of ADHD has shown to be a quick fix in the reduction of symptoms, but use of these medications has been associated with an increased potential for substance use disorder (SUD) in adulthood. This study examines the effects on the number of SUDs when pharmacological therapy is combined with cognitive behavioral therapy.

**THE LIVED EXPERIENCE OF ENDOMETRIOSIS: HOW WOMEN CHOOSE TREATMENT OPTIONS BASED ON THEIR LIVED EXPERIENCE**

**Brianna A. Warga**

Endometriosis is a condition where the lining of the uterus grows outside of the uterus. This is very painful and often affects the daily activities of women who are diagnosed. There are a few treatments for endometriosis that have been well studied, but how does a woman come to the decision for which treatment? This study looks at the lived experience of women with endometriosis and how they came to choose the treatment option they did.

**DEVELOPING THE LACTATION ASSESSMENT CARE TOOL (LACT) TO IDENTIFY NEWBORNS AT RISK FOR BREASTFEEDING DIFFICULTY**

**Jarold Johnston, Ilana Chertok, and Allyson Wessels**

New families face a myriad of challenges learning to breastfeeding during the neonatal period, forcing many families to stop breastfeeding before they intended. This tool is intended to help health care providers identify families who may face breastfeeding difficulty in the early days of breastfeeding. Initial pilot testing demonstrated an IRR of 0.87, demonstrating that this tool is reliable at detecting those families at greatest risk of premature breastfeeding cessation.





# The 10th Annual Undergraduate Symposium

## April 7 | 9 a.m. - 3 p.m.



### MORNING SESSION | ALLISON HALL 121

#### POLITICAL SCIENCE: CONFIDENCE IN GOVERNMENT AND TAXING THE RICH

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

9-9:20 a.m.

#### CONFIDENCE IN U.S. GOVERNMENT: AN ANALYSIS OF SURVEY DATA

**Carollyn Sierra** | Senior; Political Science; Fayetteville, N.C.  
**Advisor:** Dr. Andrew Ziegler, Political Science

Given the tremendous shocks the American political system has experienced this past year—a pandemic, widespread protests and violence, and the occupation of the U.S. capitol itself—many have asked how much confidence the American public still has in its government. This study used survey data collected by the World Values Survey in 2017-20 to examine various influences on confidence in the government among Americans. The major finding of this study was that political factors, like political ideology, were more influential than demographic factors, like age, in regard to levels of

confidence in the government. Another finding was that confidence in the government by political partisans is influenced by which party is power. For example, in years the government is run by Republicans, individuals positioned farther right on the political scale have more confidence in government than those to the left. The same finding applies when the government is run by Democrats. These findings may be useful by adding important information to previous research that attempts to identify possible reasons for the decline in confidence in the government. Typically, when citizens display high levels of trust in the government, it is easier for the government to function more efficiently, pass more legislation, and solve problems. Based on the findings in this study, a priority for politicians intending to increase political confidence in the United States should be to take advantage of when their political party is in power and provide government services that benefit all citizens.

9:20-9:40 a.m.

#### TAXING THE RICH IN SWEDEN: AN ANALYSIS OF PUBLIC OPINION DATA

**Edona Sefa** | Senior; Political Science; Kosovo  
**Advisor:** Dr. Andrew Ziegler, Political Science

How do the people of Sweden view taxes on the rich? Does the public in this socialist country view taxation differently from the American public, where all taxes are almost universally disliked? This study employed an analysis of survey data to examine the influences on public opinion towards taxation of the rich in Sweden. A secondary analysis of the 2010-2014 World Values Survey was conducted. The major findings were about social and political factors, as well as employment status. Sweden is known to be a very leftist country; therefore, the variable of how

much the left supports taxation of the rich was the strongest relationship between the independent and dependent variables. Also, people with full time employment did not support taxation of the rich as much as the working class or the self-employed people. On the other hand, people in the working class and the ones in lower middle class had very similar percentages when it comes to strongly supporting taxation of the rich. Finally, yet importantly, a respondent's sex was another important variable. Females were slightly higher supporting taxation of the rich.

As policy makers and candidates pursue their agendas, these findings may be useful in identifying potential support among voters for issues regarding taxation of the rich. This study would not change the entire tax system in Sweden but might impact policy makers to see the significance of taxing the rich more, or less, and how that would contribute to their economy and redistribution of wealth.

9:40-10 a.m.

#### WORLD'S INEQUALITY: TAXING THE TOP 1%

**Mujahed Aghbar** | Senior; Financial Economics, Business Administration, and Marketing; Nablus, West Bank, Palestine  
**Advisors:** Prof. Michael Wayland, Management; Dr. Paul Knudson, Sociology

The distribution of resources has been unequal in the world because a small part of the population, the top 1%, owns most of the wealth in the world. Most of that 1% is in the United States, since it has the largest number of billionaires in the world. There is enough concentrated wealth

in the United States that if it were distributed evenly, poverty could be ended and more people could afford to live better lives. Nevertheless, capitalism, poverty, and inequality persist and economic systems continue to be chaotic. The problem peaks with war and political instability around the world. Taxes can be one of the ways to ensure equality among the people in the nation, yet what level of taxation is fair for the various classes of society? And how do the rich continue to grow their wealth while being taxed? And how can the poor improve their financial stability? This presentation explores and answers the question of how history is viewed, and compares the U.S. with other developed world countries.

## MORNING SESSION | HENDRICKS 122 ENGINEERING: ADMISSIONS AND KINEMATICS

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

9-9:20 a.m.

### APPLICATION OF LEAN TO IMPROVE ADMISSIONS AND CLEARANCE PROCESSES AT METHODIST UNIVERSITY

**Jaquez Dedeaux** | Senior; Engineering, Industrial & Systems Engineering; Fayetteville, N.C.

**Patrick Gaddy** | Senior; Engineering, Industrial & Systems Engineering; Fayetteville, N.C.

**Hailey Carlyle** | Senior; Engineering, Industrial & Systems Engineering; Leland, N.C.

**Advisor:** Dr. Girish Upreti, Engineering

Methodist University serves an average of 2,300 students every year with an enrollment rate of 55%. The student-to-faculty ratio has

been documented at 12:1. After thorough analysis of the enrollment process, we have found a list of obstacles making this process difficult to complete. Many of these issues involved in the process include accessibility and transparency. To improve the admission and clearance processes at Methodist University, our team has utilized lean tools such as Define, Measure, Analyze, Improve, and Control (DMAIC) to standardize the procedures, making them more efficient. Our team has gone to all the offices concerning student admission and clearance to determine where the bottlenecks occur in each office. After determining the bottlenecks in each department, our team has established a critical path that led to a clear procedure for the entire process. Once we established a critical path, we corresponded with the faculty team who were separately working on this project to enhance the experience of students, parents, faculty, and the University as a business.

9:20-9:40 a.m.

### USE OF KNEE-ANGLE SENSOR TO DETERMINE VERTICAL JUMP HEIGHT AND TOTAL POWER IN-SITU

**Aiden Sherry** | Senior; Engineering, Industrial & Systems Engineering, and Mathematics; Fairfax, Va.

**Jacob Lowe** | Senior; Engineering, Industrial & Systems Engineering; Angier, N.C.

**Advisors:** Dr. Matthew Foreman, Occupational Therapy; Dr. Denise H. Bauer, Engineering

Vertical jump is the act of jumping upwards in the air. It is often used as a tool for recruitment and return-to-play protocol since it is an accurate indicator of athletic ability. The advancements in medical devices and wearable sensors have improved drastically over the past few years, which has led to more accurate, affordable, and accessible sensors. The team believes that using these newer devices can be used

to accurately assess vertical jump potential with respect to return to play protocols. Current methods of evaluating vertical jump include force plates, the vertec, motion labs, or video tracking. All of these methods are confined to physical therapy offices or lab spaces. Since these tests are completed in controlled environments, they are a proxy for a player's ability in a game-like environment. Using a knee-bend sensor to determine vertical jump height and power would allow for return-to-play protocol to be conducted in a robust and quantitative manner. Knee-bend sensors collect the kinematics of a jump, while current methods focus on collecting the kinetics. To utilize a knee-bend sensor, a multi-link biomechanical model must be created to translate the kinematic information to kinetic information and output the vertical height of the jump and the overall power. By collecting data from the Methodist University Motion lab and using this to verify the multi-link biomechanical model, a prototype system can be created and tested.





## MORNING SESSION | HENDRICKS 222

### PSYCHOLOGY: STRESS, CONFORMITY, AND ZOOM LEARNING

Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.

9-9:20 a.m.

#### SOCIAL SUPPORT AS A BUFFER TO DEPRESSION AND ANXIETY

**Tevin Hicks** | Senior; Psychology; Fayetteville, N.C.  
**Nicolas Schuler** | Sophomore; Psychology; Naples, Fla.  
**Chloe Backus** | Senior; Psychology; Fayetteville, N.C.  
**Advisor:** Dr. Katharine Snyder, Psychology

Many students face isolation and high levels of stressful life events during the pandemic. This study explores whether healthy levels social support may act as a buffer against the depressive symptoms that are associated with the experience of stressful life events. Participants (Methodist University psychology students) received the following surveys in a randomized order: A Support Scale, the Center for Epidemiological Studies Depression Scale (CES-D), and a Stressor Checklist. The Social

Support Scale looks at overall social support levels, in-person social support, and online social support. The in-person component includes subscales for Esteem/Emotional Support, Informational Support, Social Companionship, and Instrumental Support. The CES-D is used to measure depressive symptoms in non-clinical situations. Lastly, the Student Stressors Scale is a checklist whereby participants indicate whether they have experienced stressful events in the past six months or anticipate them happening in the next six months. Of the participants reporting high levels of stressful events, it is hypothesized that those with high social support levels will have lower depression scores than those with low levels of social support. It is also hypothesized that social support, stress levels, and depressive symptoms will vary for military and nonmilitary participants. Of particular interest is the impact of online social support. Understanding the importance of social support and when online social support is beneficial is a vital study topic during these pandemic times.

9:20-9:40 a.m.

#### CONFORMITY IN THE ONLINE ENVIRONMENT

**Bryana Dunnigan** | Senior; Psychology; Watertown, N.Y.  
**Kayla Gilbert** | Senior; Psychology; Beaverdam, Va.  
**Jerald Simms** | Junior; Psychology; Bowie, Md.  
**Erin Holland** | Senior; Psychology; Fuquay-Varina, N.C.  
**Advisor:** Dr. Katharine Snyder, Psychology

While much psychological research has been done to investigate the idea of conformity and the factors that may influence it, a new environment has arisen in modern times that lacks such critical investigation: the Internet. The purpose of this study is to provide a conceptual replication of Solomon Asch's (1951) famous conformity study in the online environment, while also examining the relationships between personality and perceived level of control on amount of

conformity. Participants in this experiment will be first asked to perform a series of line-orientation tasks alongside confederates, in which they must correctly match one line to the one of the same length out of three options. Unbeknownst to the participants, the confederates will give incorrect answers to random trials, and participants' levels of conformity will be measured by how many times they answer in congruence with the confederates. Participants will then be asked to complete Susan Cain's Adapted Inventory (Cain, 2012), and the Levenson Multidimensional Locus of Control Scale (Levenson & Miller, 1976), which measure levels of introversion and perceived level of control, respectively. It is hypothesized that participants that score higher on the introversion scale and lower on the locus of control scale will display higher levels of conformity. Implications of the present study will add to the literature on conformity, and will allow for a deeper understanding of the various factors that can influence conformity.

9:40-10 a.m.

#### THE IMPACT OF DISTRACTION ON ONLINE LEARNING IMPLEMENTED THROUGH ZOOM AS A RESULT OF COVID-19

**Logan Taylor** | Senior; Psychology; Raeford, N.C.  
**Gabriella Torgeson** | Senior; Psychology; Charlotte, N.C.  
**Jacqueline Young** | Senior; Psychology; Turbeville, S.C.  
**Advisor:** Dr. Katharine Snyder, Psychology

Due to the increase in COVID-19 cases during the spring semester of 2020, many schools and universities ceased in-class learning to lessen the spread of the disease. Consequently, remote learning introduced the potential for an increase in distractions, interruptions, and stressors. The purpose of this study is to examine the variable of distraction in the Zoom virtual learning environment and the effect it

has on emotional verbal learning and memory recall. Based on prior research, it is hypothesized that word recall will decrease in the presence of an irrelevant noise distraction in a virtual learning environment. Additionally, it is predicted that there will be a difference in recall as a function of emotion. Subjects will be tested virtually over Zoom on their memory recall over a series of five trials using the Affective Auditory Verbal Learning Test (Snyder & Harrison, 1997). A 15-word list will be presented to each subject by random assignment so that some subjects are tested with the negative word list containing words such as "hate," and others will receive the positive word list containing words such as "joy." Upon completion of the AAVLT, subjects will fill out the PANAS scale, which is an inventory of mood. The present study contributes to the literature on the AAVLT procedure and results. Additionally, implications of the current study regarding virtual emotional learning and distraction will be discussed.

**MORNING SESSION | YARBOROUGH AUDITORIUM**  
**INTERDISCIPLINARY: ETHICS AND POWER IN ART AND LITERATURE**

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

**9-9:20 a.m.**

**ETHICAL DESIGN IN THE AGE OF CONSUMERISM**

**Karen Britton** | Senior; Graphic Design; Fayetteville, N.C.  
**Advisor:** Dr. Richard Walsh, Religion and Philosophy

In my presentation, I plan to answer the following questions regarding graphic design: What effect has mass consumerism had on the world of graphic design? Can graphic design be ethically good in today's society? And why is having good design important? I am using readings regarding my discipline and the knowledge I have gained through the honors program semesters to guide my research. This project will ultimately tackle the problem of ethics in design and how design is more than just aesthetics.

**9:20-9:40 a.m.**

**THE COMMON CORE STATE STANDARD INITIATIVE**

**Kesimy Martinez** | Senior; Social Work; Orlando, Fla.  
**Advisors:** Dr. Carla Fagan, Social Work; Prof. Michael Wayland, Management

The Common Core State Standard Initiative has been established to even the playing field for public schools across America. The Standard aims to prepare students for life beyond high school as an employee or student in college. The Common Core sets standards for the subjects of English language arts and math with no guidelines for curriculum or mention of soft skills, namely inclusivity and diversity. This paper

argues that the Common Core Standards should modify its English language arts standards to include roadmaps for curriculum content to include diverse books. Students enter elementary public schools with inherent biases that are established by the age of six. It is important for public schools to teach inclusivity and diversity awareness as nationally and globally America is becoming more diverse. Students need to know how to handle diversity once they graduate from the Common Core Standards. It is found that literature can move students away from negative prejudices or reinforce said beliefs. When the Common Core State Standard Initiative adds guidelines to the English language arts standard, students will then be prepared to effectively perform beyond high school graduation.

**9:40-10 a.m.**

**SIGN SYSTEMS IN LITERATURE: STRUGGLES FOR POWER AND IDENTITY IN STORY**

**Maria Choi** | Senior; English; Fayetteville, N.C.  
**Advisor:** Dr. Richard Walsh, Religion and Philosophy

This paper is the culmination of a project examining our responsibility as readers and writers due to the relationship between stories, power, and identity. The project covers complete works from thirteen authors with varied but related focuses on semiotics, myth, post-colonialist theory, post-structuralist theory, and identity, additionally referencing many other philosophers and authors from the Honors Program. Because of the broad nature of the topic, the paper breaks down the struggle for power and identity through story into six

sections: how the language itself in stories can naturalize myths; how books represent certain economic, social and cultural positions; how Western literature reflects imperialistic and nationalistic superiority; how the connection between self and Other causes struggles for superiority; how stories and their interpretations can construct identity; and how identity of self and Other can be commodified. A deeper understanding of the power struggles at play in literature is especially necessary today, as prejudice and injustice against people of other backgrounds, ethnicities, cultures, religions, and worldviews continue. This paper hopes to show how the relationship between stories, power, and identity demands that we be responsible readers, committed to being alert and aware when we engage with literature and to recognizing that stories are continually giving and taking power.



## AFTERNOON SESSION | ALLISON 121

### INTERDISCIPLINARY: BETWEEN WAR AND PEACE

Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.

1-1:20 p.m.

#### THE LIBERATOR'S PRESENTATION OF SLAVERY AND THE SOUTH

**Hallie Smith** | Senior; History, Applied Communication; Stedman, N.C.  
**Advisor:** Dr. Patrick O'Neil, History

This presentation investigates the negative views that Northern abolitionists developed about Southern slave owners in the decades leading up to the Civil War. To conduct this investigation, I read issues of *The Liberator*, an abolitionist newspaper run by William Lloyd Garrison, at five-year intervals from its first publication in 1831 until the beginning of the Civil War in April 1861. These revealed a gradually shifting

message. In 1831 the paper stated, "Of all men living, an American citizen who is the owner of slaves is the most despicable: he is a political hypocrite of the very worst description." This paper investigates how the newspaper amplified its claim over 30 years to instead say: "The struggle has begun, but it will never end until the South has been subjected to a defeat, which will not only destroy its political influence, but ruin its property, and inflict a final punishment upon those enslaves of humanity whose ferocity has so long invoked the vengeance of the world." This gradual evolution of what would otherwise be a radical idea is a valuable lesson in how to achieve a long-term goal. Garrison's implementation of this would help spur changes of world-historical significance.

1:20-1:40 p.m.

#### CLIMATE CHANGE AND INTERNATIONAL SECURITY

**Mujahed Aghbar** | Senior; Financial Economics, Business Administration, and Marketing; Nablus, West Bank, Palestine  
**Advisors:** Prof. Michael Wayland, Management; Dr. Paul Knudson, Sociology

Climate change has a tremendous current and future impact on international security, and it is crucial that people view climate change from a holistic perspective, not simply as a temperature increase, and more likely as a world threat. Through better understanding climate

change, we can prepare to adapt and reduce its high-risk consequences. This presentation attempts to explain how climate change affects the world's security, and its intersection with the economy, health, peace, and conflict in various countries around the world. The presentation also focuses on people's accessibility to resources under climate change, how security can be a bigger stimulus for developing nations, the lower class, and colonized nations, and how those entities might further lose their security as they are more vulnerable and at higher risk of war. I use some of my personal experiences in Vietnam, Palestine, and New Zealand, while also using scholarly sources to support my research.



## AFTERNOON SESSION | HENDRICKS 122 SPORT PSYCHOLOGY: DOGS AND RECIDIVISM

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

1-1:20 p.m.

### THE IMPACT OF DOGS ON COLLEGIATE LACROSSE PLAYERS' RECEPTIVITY TO AND LEARNING FROM SPORT PSYCHOLOGY SESSIONS: A PILOT STUDY

**Aiden Sherry** | Senior; Engineering and Mathematics, Industrial & Systems Engineering; Fairfax, Va.

**Advisor:** Dr. Jamie Robbins, Physical Education & Exercise Science

"Pets are good for us" (Wells, 2009, p. 536). Theoretically, this is due to Human Animal Interactions (HAI) which have positive, calming, socializing, motivational and cognitive benefits (Busch et al., 2016). Accordingly, animals can promote the preconditions needed for effective learning (Beetz, 2017). Sport psychology practitioners must be creative in their consulting to gain the attention of busy and often overwhelmed individuals. As such, the purpose of the current study was to observe the effects of HAI on collegiate athletes' stress and mood, along with

their receptivity to sport psychology sessions and learning of sport psychology principles. A women's Division III lacrosse team participated in four, 30-minute sport psychology sessions where dogs were present. Researchers collected data through pre- and post-session questionnaires. Mood was assessed before and after each session using the abbreviated Profile of Moods State (POMS; Grove & Prapavessis, 1992). Although, stress levels were not significantly different from pre- to post-study, overall mood improved by the end of most sessions. Responses to open-ended post-study questions demonstrated retention of major sport psychology lessons (i.e. accepting differences, cognitive reappraisal, letting go) by almost all athletes. Overall, the findings show the possible benefits of utilizing dogs in sport psychology sessions to enhance mood and ultimately improve learning. The researchers will discuss possible confounding variables and make recommendations regarding future animal studies and use of animals in sport psychology practice.

1:20-1:40 p.m.

### MENTAL AND PHYSICAL TOUGHNESS BOOTCAMP: USING SPORT PSYCHOLOGY TO DECREASE RECIDIVISM

**Sydney Bird** | Sophomore; Forensic Science; Lancaster, Ohio

**Advisor:** Dr. Jamie Robbins, Physical Education & Exercise Science

There are currently over six million inmates in the U.S. prison systems (USAFacts). Two-thirds of all inmates who are released, re-offend, and are incarcerated within three years (USDOJ). Criminogenic needs at the root of recidivism include changing antisocial thinking errors, decreasing criminal companions, removing them from dysfunctional families, and increasing self-control (prisonfellowship.org). These are problems related to decision making and other cognitive functions, which have been found to be more profound in reoffenders (Ross &

Hoalken, 2011). Thus, programs created to minimize recidivism rates, must look to change the way criminals think. Sports psychology is the study of the interaction between mental skills and performance. The purpose is to teach people how their mind impacts their behaviors and how their behaviors impact their mindset. It could be hypothesized that inmates would benefit from learning psychological skills and strategies to improve their ability to: (a) set goals, (b) positively reappraise situations, (c) focus, and (d) stay motivated. Such lessons will garner the attention of inmates who likely participated in or enjoy watching sports. They will be able to better relate and apply the topics to their own lives, and consequently develop themselves in a way that will enable them to better contribute to society and avoid becoming another statistic of recidivism. The purpose of this study is to create an online sport psychology program for inmates. The current presentation will explain each of the lessons and how they will be presented to this population.



## AFTERNOON SESSION | NURSING 103

### MUSIC: HYMNS AND THE NATURAL WORLD

**Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.**

1-1:20 p.m.

#### UNITY OF WORD AND MUSIC IN MARTIN LUTHER'S CHORALES

**Alyssa Faith Hall** | Senior; Music Performance; Stedman, N.C.  
**Advisor:** Dr. Scott Marosek, Music

This research project is based on an assertion made in a 2019 article by Karol Mednansky that “unity of word and music” was a guiding principle in Martin Luther’s compositional process for his hymns. As Mednansky did not provide musical evidence to verify this claim, this research explores whether evidence from Luther’s chorales actually corroborated Mednansky’s assertion. This study found that Luther employed several key musical devices to achieve unity of text and music in his hymns: his use of syllabic handling and phrasing, his use of

contrafacta, his use of forms, and his use of modality. Study of literature from the field was invaluable for this research, with special attention given to the primary sources from Luther and his contemporaries. Luther’s hymn scores were examined to find examples of these specific musical devices at work, functioning in the manner in which Luther’s own words described. As a result, specific hymns were presented, as part of these research findings, in which these musical devices could be seen at work to achieve Luther’s goal of creating unity of word and music. These findings implicate Luther’s attention to and pursuit of unity between word and music, placing him ahead of his time when compared with other composers of his day, as these ideas about unity of word and music only became common practice as part of musical composition later in the Renaissance with the work of madrigal composers. This study focuses only on hymns specifically created by Luther.

1:20-1:40 p.m.

#### IS MUSIC NATURAL?

**Elizabeth Cox** | Senior; Music Performance, Vocal; Southern Pines, N.C.  
**Advisor:** Dr. Richard Walsh, Religion and Philosophy

For my Honors Program senior project I chose to research the question “Is music natural?” The main struggle of my research was whether music is a cultural construct or if it exists in the natural world. I came to the conclusion that music is not naturally occurring, but rather it is a culturally occurring phenomenon. Music is too closely related with

other cultural constructs like language, communication, and beauty. The process I used to achieve this conclusion was to first define what nature actually is versus the social construct of nature. Once I had a clearer idea on what nature is, I attempted to find out if music exists in it. Music is present in every culture in the world, but does that make it a universally occurring phenomenon? Music also occurs in the animal world, but is this actually music? To help answer these questions, I turned to different philosophers, including Aristotle, Kant, and Descartes, to see what their view of music was. I also read books by biomusicologists and ethnomusicologists, such as John Blacking and David Dunn.





AFTERNOON SESSION | YARBOROUGH AUDITORIUM  
ENGLISH: SENIOR SEMINAR IN LITERARY STUDIES

Note: Only presenters, advisors, and technical support staff will be allowed in the presentation venues.

1-1:20 p.m.

**OUT OF THIS WORLD: A TRANSFORMED SENSE OF SELF THROUGH ENCOUNTERING AND BECOMING OTHER IN PORTAL FANTASY**

**Maria Choi** | Senior; English; Fayetteville, N.C.  
**Advisor:** Dr. Cameron Dodworth, English

Portal fantasy has been critiqued for its connection with imperialism and colonialism, and rightfully so, since its history of development is interconnected with white superiority and the Western view of other cultures as either dangerous or exotic. However, because the nature of the genre of portal fantasy is to present encounters between the

characters of the real world and the characters of the otherworld, portal fantasy provides the perfect opportunity for authors to deal with the relationship between self and Other, a relationship which, when it incorrectly believes self to be superior, is at the root of issues of racism, prejudice, and exploitation of others. In looking at three levels of interaction between self and other in four portal fantasies by C. S. Lewis and Diana Wynne Jones, the potential of portal fantasy can be seen to not only re-enchant the real world through the eyes of the Other, which is the main benefit attributed to portal fantasy, but, more significantly, to lead to an unglorified sense of self and a more generous view of Others by allowing characters and readers to become the Other.

1:20-1:40 p.m.

**THE REAL MONSTERS**

**Franklin Pennington** | Junior; English Education; Cameron, N.C.  
**Advisor:** Dr. Cameron Dodworth, English

Some of Stephen King's stories have elements of fantasy to them. This element of fantasy is typically in the form of the supernatural. There's the wendigos from *Pet Sematary*, a possessed hotel in *The Shining*, a murderous space clown as the big bad guy in *IT*. King just loves his monsters. To a lot of average readers, these supernatural elements make for a thrilling experience. But what if there was an alternate use for

having these monsters in King's writing? When you look at King's works there are underlying themes of the human condition. If each monster represents a different part of the human condition, then King is trying to expose the true heart of humanity. The main focus for this presentation is to explore the use of symbolism in King's work in order to show the uglier side of humanity, particularly in relation to *The Shining*, *Pet Sematary*, and *Misery*. Each story has a theme that relates to some part of the human condition, such as addiction, obsession, violence, mind instability, and control. By focusing on these aspects of human characteristics, one can see how personal greed contributed to the respective downfall of certain characters in these three texts.



# The Center for Research & Creativity Faculty Symposium

## April 9 | 11 - 11:50 a.m.



### TRUSTEES 212

#### INTERDISCIPLINARY PANEL ON PHILOSOPHY IN LITERATURE AND EDUCATION

**Note: Only presenters and technical support staff will be allowed in the presentation venues.**

11-11:20 a.m.

#### A BUDDHIST APPROACH TO GRIEF AND SUFFERING: PURIFICATION IN PEARL BUCK'S NOVELLA *THE MOTHER* AND NGUYEN DU'S *THE TALE OF KIÉU*

**Dr. Whitney Larrimore Strickland**, Associate Professor, English

When grief and suffering foreground people's thoughts, people benefit by recognizing that neither challenge is unique to them. Grief and suffering are universal, affecting everyone irrespective of time, location, or class. In "The Alchemy of Suffering" Buddhist monk Matthieu Ricard writes, "According to Buddhism, suffering will always exist as a universal phenomenon, but every individual has the potential for liberation from it" (37). The liberation of which Ricard speaks results from individuals' responses to adversity and is synonymous with the term purification in

Buddhism. Two characters who overcome grief and suffering to attain purification are "the mother" the nameless protagonist in Pearl Buck's novella *The Mother* and Thuy Kiéu, the protagonist of Nguyen Du's poem *The Tale of Kiéu*. Readers see both "the mother" and Kiéu overcome their challenges in characteristically Buddhist ways. Both women suffer devastating loss and grief yet persevere to attain purification. Betrayed, abused, grief-stricken, and broken, Buck's "the mother" doggedly clings to hope. Through persisting despite her challenges and embracing her family, she emerges purified. Similarly, the enslaved, prostituted, and persecuted Kiéu maintains hopeful and emerges purified. Through persistence and determination, both protagonists accept the flawed reality of "conditioned things," realize "All things are not self" (verse 279) and move forward on their path to purification as encouraged in The Dhammapada.

11:20-11:40 a.m.

#### EXISTENTIALISM, AUTHENTICITY, AND THE CLASSROOM

**Dr. Jennifer Broome**, Chair and Assistant Professor, Education

One of the great preoccupations of existential philosophy is with the concept of authenticity. Webber (2018) explains that Sartre and his followers are grounded in the categorical imperative of authenticity; in other words, authenticity itself is a prerequisite for an understanding of oneself and by extension human existence. This simple statement has profound implications for the classroom. When describing the type of teaching and learning happening within the classroom walls, individual and collective searching for the authentic self must be regarded as paramount. This priority meshes with students' natural

search for self in adolescence (Erikson, 1968). Webber (2018) remarks that a "person does not have an inbuilt set of values that they are inherently structured to pursue. Rather, the values that shape a person's behavior result from the choices they have made" (4). This interplay of choices, roles, and co-created phenomena comprise existentialist pedagogy. The question then becomes, how do teachers best instantiate learning that abets students' individual search for the authentic self to flourish? This presentation proposes a framework of pedagogies that takes such considerations as the center of teaching practice. Through seminar, informal and formal writing, individual and collective problem solving, deep reading, values clarification, and introduction to existentialist ideas, students and teachers can work towards the moral imperative of a truly individual self.



TRUSTEES 208  
INTERDISCIPLINARY PANEL ON HEALTH

Note: Only presenters and technical support staff will be allowed in the presentation venues.

11-11:20 a.m.

MEDICARE FOR ALL

Dr. Donald S. Brady, Interim Chair and Associate Professor, Health Care Administration

There is general agreement that the American public wants universal medical coverage. Several studies demonstrate that most Americans consider access to quality medical services to be a right. This view is supported by original research by Dr. Brady. The primary objection to universal coverage results from the cost of providing the benefit, not a desire to prevent people from receiving needed medical care.

Comprehensive medical coverage is expensive. Family medical coverage for faculty and staff of Methodist University is approximately \$1,800 per month (employee + University contribution). Medicare (medical insurance) premiums are currently approximately \$150 per person per month, and several political leaders have proposed expanding Medical to cover all Americans. Medicare's primary function is to provide medical insurance to Americans 65 and over. This presentation examines the consequences and opportunities of expanding Medicare to cover all Americans. Current literature regarding the financial viability of Medicare for All and financial calculations by Dr. Brady will be presented in the symposium presentation.

11:20-11:40 a.m.

STRATEGIES TO REDUCE ANXIETY AND ENHANCE  
SUCCESS FOR OCCUPATIONAL THERAPY  
PRACTITIONER STUDENTS

Dr. Jeffrey Loveland, Instructor, Occupational Therapy

Anxiety is now clearly the most common health diagnosis impacting college students. Student anxiety is common at all undergraduate levels as well as graduate school training. It can compromise performance in knowledge and skill development in academic and internship areas and in achieving success on national certification and state licensure outcomes. The impact of changes in the educational process due to the COVID pandemic on students across all levels of learning have been significant, which has led to greater stress and unproductive

worry. Modifications involving virtual instruction combined with differences in roles, routines, meaningful activity involvement and social participation with peers, instructors, and staff have taken an emotional toll on students of all ages and in all settings. Specifically, anxiety demonstrated by health care professional students in several areas has not been well documented, although it has been discussed as a significant issue between all participants in the educational process- students, faculty, and clinical educators. This session will focus on student anxiety in occupational therapy educational programs, how it's identified and addressed from a programmatic standpoint, and how students can learn to actively feel more composed, confident and in-control in academic and clinical settings. Challenges identified and strategies discussed can have applicability to students in a variety of academic levels and programs.





## AN UPDATE FROM THE CENTER FOR RESEARCH AND CREATIVITY

### Dr. Cameron Dodworth, Director

The 2019-2020 academic year was on pace to be a record-breaking benchmark for the Methodist University Center for Research and Creativity. The portion of the CRC annual budget reserved for funding student research/creative projects and research/creativity-related student travel was used up by January, and a record number of undergraduate and graduate students were scheduled to present their research and creative projects as posters and oral presentations in the Ninth Annual Center for Research and Creativity Symposium on April 1, 2020.

However, by the Monday after Spring Break, March 9, 2020, developing world events related to the novel coronavirus, COVID-19, appeared poised to disrupt the daily lives of those of the Methodist University campus and community, along with the rest of the United States of America, and much of the rest of the world. Later the following week, Methodist University classes were put on hiatus, and by Monday, March 23, 2020, all in-person Methodist University classes had been transitioned to remote learning, the campus was almost completely shut down, and the 2020 Symposium was officially canceled.

While a potentially record-breaking year transitioned into a tumultuous, disappointing, and even tragic year during the spring of 2020, the administration, faculty, and staff of MU worked to salvage as much of the 2019-2020 academic year as they could for MU students, given the circumstances. A byproduct of those efforts was the Ninth Annual CRC Symposium, which ultimately consisted of student projects and materials linked to the Symposium program and stored on the CRC website. That was unfortunately the extent of last year's Symposium, but as a result, for the present and future Symposiums, the CRC will always give students the options to display their work in the same manner—as well as storing a video of their oral presentation on the CRC website—therefore providing them with a permanent place where anyone can access their work and see the cool things that our students do at MU.

Unfortunately, the pandemic of the spring of 2020 continued into 2021, and therefore further disruptions of MU “normalcy” have become the norm, now more than a year later. However, due to help from a lot of people, we are fortunately able to stage a “live” Symposium this year, though the in-person factor will apply to the presenters, as the “attendees” will only be able to see the oral presentations via Zoom. Again, though, Zoom recordings of those presentations will also be available on the CRC website, so hopefully that enhanced availability will help to somewhat make up for the loss of an in-person audience. Also, presenters will be available live on Zoom for the Q&A session following the presentations.

The MU CRC would like to sincerely thank everyone who has worked very hard to make this year's Symposium possible, particularly Doo Lee (MU Graphic Designer & Campus Photographer), Michael Molter (MU Webmaster & Canvas Administrator), Prof. Paul Joseph (Associate Professor of Mass Communications), Dr. Kevin Swift (Chair, Department of Communication and Associate Professor of Mass Communications), and the Mass Communications students for the extra work that they all put into making these materials available to you during and after the 10th Annual CRC Symposium.



methodist.edu | 910.630.7000 | 5400 Ramsey Street, Fayetteville, NC 28311  
 facebook.com/MethodistUniversity

[Back to Table of Contents](#)