

THE FIFTH ANNUAL  
UNDERGRADUATE RESEARCH  
AND CREATIVITY SYMPOSIUM





"One of the highlights of the academic year is the Undergraduate Research Symposium and related activities that involve our undergraduate students, graduate students, and faculty. It places emphasis on scholarly endeavors, and showcases the collaborative work within our University community."

– Dr. Ben E. Hancock, Jr.  
*President, Methodist University*

"I am pleased that Methodist's Center for Undergraduate Research and Creativity encourages students and faculty to collaborate on research and creative endeavors. Faculty enjoy mentoring their students, helping students prepare for graduate school and successful careers."

– Dr. Delmas S. Crisp, Jr.  
*Executive Vice President*



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

The mission of the Methodist University Center for Undergraduate 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.

METHODIST UNIVERSITY



JOURNEY

**Methodist University's**  
**4<sup>th</sup> Annual Research and Creativity Week**  
**&**  
**5<sup>th</sup> Annual Undergraduate Research and Creativity Symposium**

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## SYMPOSIUM WEEK AGENDA | APRIL 11-13, 2016

### Monday, April 11

11 – 11:50 a.m.	Faculty Presentations	Locations Vary
5:30 – 8 p.m.	Third Annual Graduate Research Symposium	PA Auditorium

### Tuesday, April 12

7 – 8:30 p.m.	Five Poets, Ten Poems: The Voices of Advanced Poetry Students	PA Auditorium
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### Wednesday, April 13

8:30 a.m. – 3:30 p.m.	Fifth Annual Undergraduate Research Symposium	Locations Vary
3:30 – 5 p.m.	University Awards Ceremony	Huff Concert Hall

## FACULTY PRESENTATIONS | APRIL 11, 2016

### 11 – 11:30 a.m.

Dr. Tat Chan	“Fitting a Non-Capstone Project into a Busy Course”	Hendricks 122
Dr. Matt Kesic	“IL-1 Blockade is a Novel Treatment for Acute Asthma”	Hendricks 222
Dr. Cu Phung	“Using 3D Printed Models in the Chemistry Curriculum”	Hendricks 242
Dr. Mark Kline	“Does Immature Drinking Lead to Immature Emotional Development”	Allison Hall 121
Dr. Jarold Johnston	“The Societal Impact of Human Lactation”	Nursing 103

### 11:30 a.m. – Noon

Dr. Terry Randall and Ms. Vickie Erben	“Informal Writing Research”	Hendricks 122
Dr. Vijay Anthram	“Can the Gut Microbiota Reduce Cholesterol? Insights Involving Gut Microbiota Perturbations During Colstridium Difficile Infection”	Hendricks 222
Ms. Arleen Fields Dr. Cristina Francescon, Ms. Doris Munoz, and Ms. Jennifer Ramos	“Beyond Google Scholar: Guiding Your Students Towards Appropriate Research Sources” “Developing a Study Abroad Program from Start to Finish”	Allison Hall 119 Nursing 103

## FIFTH ANNUAL UNDERGRADUATE SYMPOSIUM | APRIL 13, 2016

8:30 – 9:15 a.m.	Open Reception (Sponsored by Lura S. Tally Center for Leadership Development)	Union-Zukowski Lobby
9 – 11 a.m.	Morning Session	See Program for Locations
11 – 11:45 a.m.	Chapel	Hensdale Chapel
Noon – 12:45 p.m.	Lunch	On Your Own
1 – 2 p.m.	Special Presentations: “Cape Fear New Music Festival Concert”	Reeves Room G5
1 p.m.	Dr. Michael Potts: “Myth and History in Alan Hovhannes’s Symphony No.60”	
1:30 p.m.	Dr. Keith Dippre and Prof. Kerry Jenkins: “Rebecca”	
2 – 3:30 p.m.	Afternoon Session	See Program for Locations
2 – 3:30 p.m.	Poster Session	Union-Zukowski Lobby
3:30 – 5 p.m.	University Awards Ceremony	Huff Concert Hall

*\*Posters will be displayed in Union-Zukowski Lobby beginning at 9 a.m.  
Students will be available for questions during the afternoon Poster Session.*

# PRESENTATION SCHEDULE

## MORNING SESSION | APRIL 13, 2016

### Education, Chemistry and Biology | Hendricks 122

9 – 9:30 a.m.	The Benefits of Math Manipulatives on Children in Today's Schools	Connor Kingdom
9:30 – 10 a.m.	The Effects of Social Bullying on the Academic Success of Third Grade and Fifth Grade Students in a North Carolina Southeastern Elementary School	Madison Pierpoint
10 – 10:30 a.m.	Quantitative Determination of Heavy Metal Contaminants in Wines from North Carolina Vineyards by Atomic Absorption Spectroscopy	Haily Haas
10:30 – 11 a.m.	Plant Powers: The Antimicrobial Nature of Plant-based Cleaning Products	Megan March

### Psychology | Hendricks 222

9 – 9:30 a.m.	Art Therapy: Adult Coloring Stress-Reduction Technique	Joel Jerdee, Hannah Moore, Taylor Sluss
9:30 – 10 a.m.	Biofeedback for Authenticating Experimental Interventions via Control and Replication of Evidence Supported Treatments	David Cleveringa, Richard Kurr, Silvia Noftz
10 – 10:30 a.m.	The Effects of Dog Therapy and Priming on Learning and Sleepiness	Melody Allison, Kelsey Harrington, Tabias Hilliard, Sarah Rurycz
10:30 – 11 a.m.	Priming Implicit Associations	Shelby Withbroe, Mariah Wright, Porshia Daniels, Amber Weigel

### Computer Science and Political Science | Nursing 103

9 – 9:30 a.m.	Hotel Management – Advanced Application	Elvis Kahric
9:30 – 10 a.m.	Coffee Time – The App for Meeting and Making Friends	Davor Pranjić
10 – 10:30 a.m.	Public Support for Environmental Policies in America	Pierre-Ricardo Jean-Baptiste
10:30 – 11 a.m.	Globalization Among Nations: An Empirical Study	Manin Keo

### Honors Program | Reeves G5

9 – 11 a.m.	Aristotelian Nursing	Rachel Krogstie
	The Philosophy of Nursing	Grizel Bello Barja
	If You Prick Me: Justice Implication in <i>The Merchant of Venice</i>	Tanya Waller
	Relating Camus to Psychology	Hannah Moore
	Sick Souled: The Paradigm of Luther's Reformation in the Study of Psychology	Richard Kurr

### Theatre | Huff Concert Hall

10 – 11 a.m.	Breaking Barriers	Teresa Hammonds
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# PRESENTATION SCHEDULE

## AFTERNOON SESSION | APRIL 13, 2016

### MU Journey: The Study Abroad Experience | Alumni Dining Room

2 – 3:30 p.m.	The Ultimate Journey	Ahmed Aljukhaydib, Brianna Beck, William Cameron Brewer, Sierra Emanuel, Katilynn Gray, Erin Haley, Samantha Hill, Alys Hilliard, Ann Mixon, Taylor Owens, Kayleen-Marie Smithling, Jason Sparrow
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### Math | Hendricks 122

2 – 2:30 p.m.	Codes in Higher Dimensions	Samantha Scoggins
2:30 – 3 p.m.	Art of Balancing in Chemistry	Emir Nazdrajic
3 – 3:30 p.m.	Encrypt My Cloud	Moses Jackson Malish Sebit Chandiga

### History and English | Hendricks 222

2 – 2:30 p.m.	<i>Le donne forti</i> : Sex, Marriage, and the Expression of Female Agency in Boccaccio's <i>The Decameron</i>	Miranda Jade Friel
2:30 – 3 p.m.	Fallen Angels, New Women, and Shakespeare's <i>Much Ado About Nothing</i> : Modern Stereotypes in the Elizabethan Era	Stacy Pifer
3 – 3:30 p.m.	The "Banality of Evil" in the Lives and Actions of German Prisoners During the Holocaust	Cheri Molter

### Economics and Accounting | Nursing 103

2 – 2:30 p.m.	China's Dual System: How is Communism Compatible with a Free Market Economy?	Daniel Sasfy
2:30 – 3 p.m.	Auditing: The Misunderstood Function of Accounting – An Informative Discussion Going behind the Scenes of an Audit	David Szajnuk, Mary Madison Kizer, Jason Wittcop, Francisco Garduno

## POSTER SESSION

Posters will be on display beginning at 9 a.m. in the Union-Zukowski Lobby of the Reeves Fine Arts Building. Students will be standing by their posters 2 – 3:30 p.m.

Atomic Absorption Analysis of Electrolyte Content in Sports Drinks and Food Products Utilized by Athletes for Muscle Cramp Relief	Katayoon "Kate" Dowlatshahi
Contamination of Water by Agricultural Wastes	Jobert Exsatel
Spectroscopic Environmental Analysis of Heavy Metal Contaminants in Water and Soil Samples from the Methodist University Campus and the Cape Fear River	Haily Haas, Cheryl Krupa, Elisabeth "Mila" DeSousa
Fluoride: Is It Safe to Drink?	Tracey Raupp
Human Trafficking Is in Our Backyard	Rhodesia A. Taylor

MORNING SESSION | EDUCATION, CHEMISTRY, BIOLOGY | HENDRICKS 122

9 a.m.

**The Benefits of Math Manipulatives on Children in Today's Schools**

**Connor Kingdom** | Junior, Elementary Education | Franklin, Pa.

Advisor: Ms. Beth Ruff

Mathematical concepts are becoming an increasing problem for children in today's society to grasp. One way to help children grasp many of these concepts is through the early implementation of manipulatives. There are a large variety of manipulatives that can assist children's learning both visually and kinesthetically, but early implementation is critical. They should be implemented in the classroom, at home, and through one-on-one help from teachers. Manipulatives can be the one step a child needs to go from concrete to abstract thinking. This presentation will explain the benefits of early implementation of manipulatives in the classroom and how these manipulatives can be used to build a student's abstract thinking.

9:30 a.m.

**The Effects of Social Bullying on the Academic Success of Third Grade and Fifth Grade Students in a North Carolina Southeastern Elementary School**

**Madison Pierpoint** | Senior, Elementary Education | Fayetteville, N.C.

Advisor: Dr. Jaunita Heyward

As I began my Senior Capstone project last semester, I wanted to explore an educational topic of social and academic substance. Bullying has been an increasingly hot topic in the news over the past few decades. As a future elementary school teacher, I was curious as to what age bullying began in earnest as well as to what degree it affected the elementary school students. My study showed how third and fifth grade students at a rural elementary school were affected by bullying. After I researched bullying within the elementary schools, I gathered my data. I surveyed five third and five fifth grade classes at a rural elementary school. I evaluated the surveys and discovered two major points. First and foremost, bullying is occurring at a shockingly early age because numerous third graders reported being bullied in a previous grade. Also, some students reported that bullying has affected their ability to learn at such an early age. Clearly, much more in-depth research is needed, particularly within the elementary level, to eradicate bullying from the school system. I plan to further research this topic when I study to earn my master's degree in elementary education.

10 a.m.

**Quantitative Determination of Heavy Metal Contaminants from Wines in North Carolina Vineyards by Atomic Absorption Spectroscopy**

**Haily Hass** | Senior, Chemistry | Yankton, S.D.

Advisor: Mrs. Mouna DiBenedetto & Dr. Lori Brookman

The heavy metal content in wines has been reported to be higher than recommended in various places worldwide. For this reason, I analyzed the heavy metal content of various North Carolina wines. Eight different types of wine from various wineries around North Carolina will be analyzed for their arsenic, chromium, lead, and copper contents. This will be done using Atomic Absorption Spectroscopy (AAS). The found values will be compared to international wine and water quality standards, which will indicate whether or not the wine is safe for consumption. This is important, as the contents of alcoholic beverages in the U.S. are largely unregulated, and there is no regular quality sampling in regards to heavy metal content required by the government. This leaves a window of opportunity for dangerously high heavy metal contents to be contained within wines.

## MORNING SESSION | EDUCATION, CHEMISTRY, BIOLOGY | HENDRICKS 122

10:30 a.m.

**Plant Powers: The Antimicrobial Nature of Plant-based Cleaning Products****Megan March** | Senior, Non-degree Seeking | Madison, Ala.**Advisors: Mrs. Mouna DiBenedetto & Dr. Lori Brookman**

Common chemical-based household cleaning products are slowly meeting opposition within the American population. This growing resistance can be attributed to primary factors: first, the prevalence of “superbugs” and antibiotic-resistant microbes as a result of overuse and misuse of antibiotics and antimicrobial cleaning products, and second, the pervasiveness of harmful or toxic chemicals in products advertised as “antibacterial.” Triclosan, parabens, phthalates, and sodium lauryl sulfate (SLS) are a few well-researched ingredients known to have adverse effects on humans with consistent exposure. These effects are on a spectrum of severity, and include minor skin irritations to endocrine disruption and elicitation of the body’s inflammatory response. The purpose of this experiment was to find out if plant-based, “natural” household cleaning products are as effective as their chemical counterparts. “Natural” was defined as containing 90% or more plant-based product and included essential oils. “Cleaning products” were defined as multi-purpose cleaners and hand sanitizers. Disk diffusion assay on Mueller-Hinton media was used as it is recommended for non-fastidious organisms. A total of 21 products, consisting of 18 natural products and 3 chemical products for reference, were tested for effectiveness of inhibiting the growth of 13 microbes. The 10 bacteria, 2 yeasts, and 1 mold were selected because of their prevalence in households and strongly negative effect on human health. Due to laboratory limitations, viruses were not tested. The results showed that the therapeutic-grade essential oils “Thieves,” a mixture of clove, cinnamon, lemon, eucalyptus, and rosemary, and “Tea Tree,” taken from the leaves of the *Melaleuca alternifolia* tree, were just as effective at fighting microbes as their strongest chemical equivalent, 5% lysol. The products whose constitution was 100% plant-based did better than the plant-chemical mixture products. GermX hand sanitizer and baking soda with distilled white vinegar performed the worst. Based on this research, there are drastic implications for household cleaning. These trials show that these two essential oils can be used for cleaning without loss of performance, which begs the question if there are more essential oils that have strong antimicrobial tendencies. Additionally, the use of these oils could decrease unnecessary exposure to potential toxins as well as decrease the potential for creation of more superbugs. More testing is needed to verify the benefits of essential oils instead of chemical cleaning products on a commercial scale.



## MORNING SESSION | PSYCHOLOGY | HENDRICKS 222

9 a.m.

### Art Therapy: Adult Coloring Stress-Reduction Technique

**Joel Jerdee** | Senior, Psychology | Valdosta, Ga.  
**Hannah Moore** | Senior, Psychology | Jacksonville, N.C.  
**Taylor Sluss** | Senior, Psychology | Lumberton, N.C.

Advisor: Dr. Katharine Snyder

Adult coloring books have been suggested to reduce stress and anxiety levels and have enjoyed recent popularity, as evidenced by the fact that Amazon's top two best-selling books are adult coloring books. Stress reduction as a result of mandala coloring as well as guided breathing exercises was examined through three stress and anxiety measures. College students are the appropriate choice as subjects to examine the effectiveness of the aforementioned stress relieving techniques. Subjects are asked to complete a ten-point version of the Perceived Stress Scale (PSS) to establish baseline stress and anxiety. Subjects are given a learned helplessness task of unsolvable anagrams to increase stress, and retake the PSS-10. A combination of mandala coloring and guided breathing exercises are tested in their effectiveness of reducing stress, measured afterward once again by the PSS-10. The Taylor Manifest Scale is used afterward for additional data to review correlation. Validity of the stress and anxiety measures was determined through research reviews. Subjects are also presented with an unusual uses test to measure creativity levels. Findings of this experiment will help determine if the stress reduction techniques used can be helpful in other settings such as therapy for anxiety disorders, stress disorders, PTSD, or everyday stress. Implications of positive findings in college students will apply to working adults and potentially children. A correlation between decreased stress after the methods and increased creativity as measured by the unusual uses test can help specify stress relief methods to different personality types.

9:30 a.m.

### Biofeedback for Authenticating Experimental Interventions via Control and Replication of Evidence Supported Treatments

**David Cleveringa** | Senior, Psychology | Pinehurst, N.C.  
**Richard Kurr** | Senior, Psychology | San Juan, Puerto Rico  
**Silvia Nofzt** | Senior, Psychology | York, S.C.

Advisor: Dr. Katharine Snyder

The advent of the post 9/11 world has changed our society significantly in many respects. One unintended silver lining of this phenomenon is the fact that we have a deeper understanding of PTSD (Post Traumatic Stress Disorder). Despite this, there is currently the need for further research in the treatment of this condition and to corroborate the outcomes of currently existing therapeutic approaches. The aim of the present study is to verify the efficacy of an experimental treatment referred to as BATI (Brief Academic Therapeutic Intervention). In an academic environment BATI has shown significant potential in the treatment of students with PTSD in the academic environment (Kline, 2015). A sub-group of volunteer participants have been chosen to undergo supplementary/complementary treatment protocol referred to as BATI + (plus). It consists of a biofeedback-based protocol, utilizing the iWorx.Tm TA Physiology Kit and the LABScribe3 software. The Biofeedback treatment approach has been extensively peer assessed and corroborated as an effective therapy nationally. The intent is to compare treatment groups to contrast and assess whether the original group and subsequent BATI + samples would potentially benefit from the Biofeedback intervention. If proven efficient, BATI and its counterpart could become part of further studies that may lead to the eventual adoption of this treatment for students suffering from trauma-based conditions such as PTSD.

## MORNING SESSION | PSYCHOLOGY | HENDRICKS 222

10 a.m.

### The Effects of Dog Therapy and Priming on Learning and Sleepiness

**Melody Allison** | Senior, Psychology | Fayetteville, N.C.

**Kelsey Harrington** | Senior, Forensic Science & Psychology | Columbia, Mo.

**Tabias Hilliard** | Senior, Psychology | Rocky Mount, N.C.

**Sarah Rurycz** | Senior, Psychology & Social Work | Syracuse, N.Y.

**Advisor: Dr. Katharine Snyder**

According to a study done by S.P. Cohen in 2002, over 85% of families in the United States regard their companion animal as a family member. Fifty-seven percent of them state that if they had to choose one companion to go to a deserted island with, they would choose their pet (Walsh, 2009). This study will have four parts. After the informed consent, the participant will either review vocabulary or watch a video, and then the participant will perform a high/low imagery word learning task, and the Epworth sleep scale. The first hypothesis is a question on whether or not a dog being present in a learning environment will change a person's learning ability. The second hypothesis anticipates a main effect on priming. Priming is the activation of some representation of memory with a consequent facilitation of performance in a task that involves that representation (Gardiner & Gardiner, 1991). The third hypothesis is that there will be a main effect of the word pairs. The fourth hypothesis is that the participant who studies the vocabulary prior to the study and received the high imagery word pairs will exhibit better recall than participants who received the lecture prior to the study and received the low imagery word pairs. The last hypothesis anticipates that subjects who study vocabulary versus watching the lecture will have higher scores for the low imagery words.

10:30 a.m.

### Priming Implicit Associations

**Shelby Withbroe** | Senior, Psychology with human performance concentration | Longview, Wash.

**Mariah Wright** | Senior, Psychology with clinical counseling concentration | Petersburg, Va.

**Porshia Daniels** | Senior, Psychology | Fayetteville, N.C.

**Amber Weigel** | Senior, Psychology with clinical counseling concentration | Baraga, Mich.

**Advisor: Dr. Katharine Snyder**

This research study consists of a priming (prime, or no prime) condition on both the time and level (strong, moderate, little to no) scored on the Implicit Association Test (IAT). There is also a quasi-variable of levels of sleepiness on time scores of the IAT. The focus is to alter subjects scores on the Implicit Association Test through a priming effect and to correlate differences in time scores due to cognitive fatigue in relation to the Epworth Sleepiness Scale (ESS). In this study priming involves an activation of cognitive awareness of perceptions of mental illnesses through viewing an eight-minute Ted Talks video. There are two main effects present in this study: a main effect of priming and a main effect of sleepiness. The first main effect hypothesis states, subjects who receive the priming condition will score differently on the IAT compared to those who do not receive priming. The second main effect hypotheses states, subjects who report poor quality levels of sleep will exhibit slower time responses than subjects with average or good quality sleep.

MORNING SESSION | COMPUTER SCIENCE AND POLITICAL SCIENCE | NURSING 103

9 a.m.

**Hotel Management – Advanced Application**

**Elvis Kahric** | Freshman, Computer Science & Mathematics | Una, Bosnia and Herzegovnia

Advisor: Dr. Terry House

Because I come from a country that is said to still be in development, our cities are not as equipped with modern technology. Thus, as a project for my Computer Science course in Visual Basic, I have decided to make an advanced application. Throughout the research, I communicated with the manager of a local hotel in Una called Hotel Eki. With his input, I decided to create the “Advanced Hotel Management Application.” We concluded that for the proper functioning of this hotel, an application like this will be necessary in future. The application itself is connected with SQL database, which allows multiply entries, readings from database and editing as well as manipulating with information. The whole application is divided into two interfaces; the first one is for the management of the hotel, while the other application is for guests. The guest application allows guests to get information about the hotel, check their status as a guest, and check room availability, and enter the virtual gallery. The application for management has a slightly different GUI (Graphical User Interface). Managers are able to enter their own panel with tools such as payroll, services, guest check-in, and read-only database access. The application was made based on my own knowledge and it is easy to access for everyone.

9:30 a.m.

**Coffee Time – The App for Meeting and Making Friends**

**Davor Pranjić** | Freshman, Computer Science | Mostar, Bosnia and Herzegovnia

Advisor: Dr. Terry House

Coffee Time Android app lets its users organize meeting with their old friends, and meet new people in the area with similar interests. By implementing Facebook, our solution enables our users to quickly and easily set up the app, find their friends for hanging out and send them a quick invite. By implementing GPS, our solution enables its users to also meet people of similar interests in the area who've checked in recently and are up for a coffee and meeting someone new. For organizing meetings, the app uses a simple interface oriented to casual meetings, and for finding new friends we implement a simple filter for interests, with the whole philosophy based on the campus roommate algorithms. We believe our solution will be useful to many – in a world where people tend to project their whole personalities into their social network accounts and almost forget about human contact, we're providing a solution that actually uses all the social network info, publicly stated likes and dislikes, to help people get out and meet for a coffee, tea, movie or whatever it is that connects them with their old or potential new friends.



## MORNING SESSION | COMPUTER SCIENCE AND POLITICAL SCIENCE | NURSING 103

10 a.m.

### **Public Support for Environmental Policies in America**

**Pierre-Ricardo Jean-Baptiste** | Senior, Political Science & Environmental Management | Port-Au-Prince, Haiti

Advisor: Dr. Drew Ziegler

Decades of research have focused on people's behavior and attitudes toward the environment. However, individuals' opinion on spending for the environment has received little attention. Using quantitative and empirical analysis of survey data, this research aimed to explore American public opinion in supporting government spending for environmental protection and improvement. The study was conducted with data taken from the 2008 General Social Survey. Three main factors that characterize public opinion on government spending for the environment are political, socioeconomic, and demographic. The results indicate that political factors such as ideology and political affiliation are the most influential in determining public support for government spending on the environment. Democrats and liberals seem to show support for more government spending on environment while Republicans and conservatives tend to be against this kind of spending. Although not as strong as political factors, socioeconomic and demographic ones, such as education, occupation, church attendance, and age, correlate with support for government spending on environment. Region and social class are not really determining aspects that can explain public opinion for government spending on environment. Because environmental issues are always raised during electoral campaigns, these results can be significant for candidates to know how to address environmental issues in their campaigns. As the U.S Congress will have to pass laws during their mandate, there will be an increase in government spending for the environment if the party with a majority is the Democrats. If the Republicans control the Congress, less money may be spent for the environment.

10:30 a.m.

### **Globalization Among Nations: An Empirical Study**

**Manin Keo** | Senior, Political Science | Phnom Penh, Cambodia

Mentor: Dr. Drew Ziegler

This is an empirical study of aggregate data. This study examines what nations are more likely to be part of the world community and what are the benefits or downsides of globalization. The major findings of this study are countries who are more likely to be globalized are countries with smaller populations, European countries, countries with less cultural conflict, countries with democratic type of government, and countries with less free trade restriction. Globalization has brought prosperity, for example, an increase in wealth of citizens by measuring GDP per capita and globalization encourages more countries to export their technology products. As globalization has contributed to the events of the world, policy makers or other students can use this research to understand more about globalization to see what causes countries to be more globalized and advanced than others. In addition, if countries want to be more globalized to increase in their citizens wealth, they can decrease their free trade restrictions by having more foreign direct investment or change from an autocratic to democratic type of government.

## MORNING SESSION | HONORS PROGRAM | REEVES G5

9 – 11 a.m.

(Note: Honors Program presentations have varying times)

### Aristotelian Nursing

**Rachel Krogstie** | Senior, Nursing | Beaumont, Texas

Advisor: Dr. Richard Walsh

According to Lennart Nordenfelt, there are two differing theories on health and disease. These are the Biostatistical Theory, which has a disease-focused and biological worldview, and the Holistic Theory of Health, which has an illness-focused and humanistic worldview. In addition to the metaphysical differences in the theories, they also privilege different groups at the expense of others. In my course of study in the Honors and Nursing Programs, I studied various works supporting each of these theories. While my paper explores several of these works, my review focuses on those which support the Holistic Theory as I have become convinced that nursing practice should see and serve humans as more than disease-ridden machines. Of those whose views support such a holistic approach to nursing, I concentrate on Aristotle, Jean Watson, and Michel Foucault. For Aristotle, a human being is not “good,” healthy, or happy unless he/she is maximizing his/her human potential of living well and doing well over a lifetime. While Aristotle considers material matters an indispensable base, this good life is more than the absence of disease, poverty, and so forth. Writing years later, Jean Watson has articulated a Theory of Human Caring that understands the relationship between nurse and patient philosophy in “human,” rather than merely medical terms. In simplest terms, her understanding of nursing practice is not unlike Martin Buber’s idea of “I-Thou” as opposed to “I-It” relationships. Finally, Watson/Buber’s focus on different possible social-political relationships among humans or in nursing suggests that one should be aware of the “power” relationships implicit in any knowledge and institutional practice. To avoid pretensions of innocence in my nursing practice, I close with a look at Michel Foucault’s exploration of the politics involved in the construction of modern medicine and its practitioners and patients.

### The Philosophy of Nursing

**Grezel Bello Barja** | Senior, Nursing | Cuba

Advisor: Dr. Richard Walsh

My presentation will cover the issue of nursing theoretical works and the confusion that can arise when attempting to implement them in nursing practice. My work will address this issue by exploring and explaining the four different types of theoretical works and their philosophical roots. An example will be provided by using one theoretical work from each category and explaining how they correlate and build upon each other, as well as famous philosophers from which they stem. The example will be composed of Florence Nightingale for the nursing philosophy, Imogene King for the nursing conceptual model, Margaret Newman for the nursing theory, and Pamela Reed for the middle-range nursing theory. This information will be useful to nursing students and nurses because it will aid them in formulating their own nursing theoretical framework to apply in their nursing practice. Theories are an integral part of nursing and begin with possessing a basic understanding of how they work and how they can be integrated in practice to provide excellent patient care.

### If You Prick Me: Justice Implications In *The Merchant of Venice*

**Tanya Waller** | Senior, Justice Studies & Applied Forensic Science | Athens, Ala.

Advisor: Dr. Jennifer Rohrer-Walsh

The U.S. justice system has been critiqued since it was established; recent events have refocused efforts to understand and change the perceived injustices associated with the judicial process and the ultimate purpose of the system. Problems and issues with how the justice system works are not new, nor is it strictly a U.S. problem, with even the U.S. Department of Justice acknowledging the challenge in finding a singular effective means to address criminal behavior. The same issues have occurred since formalized governments were established. As the U.S. justice system relies heavily on the British justice system, it is appropriate to look to England for insight into relevance to modern justice issues. William Shakespeare’s *Merchant of Venice* highlights the use of law and various types of justice approaches. Utilizing *Merchant of Venice* as a platform, three modern day themes of justice will be explored: procedural justice, retributive justice, and restorative justice. The expansion of each of the three theories of justice presented will use research by three present day authors: Tom Tyler’s “Why People Obey the Law” (Procedural), Alec Walen’s “Retributive Justice” (Retributive), and Charles Barton’s “Theories of Restorative Justice” (Restorative).

## MORNING SESSION | HONORS PROGRAM | REEVES G5

### Relating Camus to Psychology

**Hannah Moore** | Senior, Psychology | Jacksonville, N.C.

**Advisor: Dr. Richard Walsh**

Developing the similarities between prominent psychologists and Camus can be used to investigate the far-reaching influence of existentialism and its effects on literature of the time. Research into several theories of personality namely Sigmund Freud, Erich Fromm and Alfred Adler reveal many concepts and theories found in Albert Camus's works, including *The Myth of Sisyphus* and *The Plague*. The purpose of the paper is to relate the field of Psychology to an assigned reading of the Honors Program. Beyond that, there are no parameters of the present study. There are no shortage of similarities between the aforementioned psychologists' theories of personality, and Camus's description of the human condition. Specifically, although Camus denied having been an existentialist, the spirit of existentialism of the time was important to Camus' insistence on rational thought. This emphasis on rational thought can also be found in Freud's conception of eros and thanatos, or life and death forces; Fromm's theorization of the implications of human transcending nature, or existential dichotomies; and Adler's suggestion of free will, as opposed to determinism. Understanding the implications of that may bring to mind the wide implication of one discipline's influence on another, and the ways in which academia interacts and feeds off of many different ideas.

### Sick Souled: The Paradigm of Luther's Reformation in the Study of Psychology

**Richard Kurr** | Senior, Psychology | San Juan, Puerto Rico

**Advisor: Dr. Jennifer Rohrer-Walsh**

What would Martin Luther have told his therapist if he had had one? What originated as an exercise in applying the Great Book to the field of Psychology, evolved into the study of the motivations of one of the most influential men in human history, Martin Luther (1483-1586.) The Protestant Reformation shifted the paradigm from Scholasticism to modern Christianity, which emphasized the individual's relationship with Christ or God—the Priesthood of the Believer—and can be seen as the embryonic stage of modern psychology's emphasis on subjectivity. Luther's work would not just shake the established power structure of the Catholic Papacy to its core but also (perhaps unintended by Luther), elevate the self-perception of the ordinary man by triggering him to question his place beyond that of his fated limitations. This discussion uses samples of Luther's letters and authored works to set a historical context for his argument to gain a deeper understanding of his motivations and internal conflicts on the subjects of submission and faith to God versus the evident rebellion he led against the church.

## MORNING SESSION | THEATRE | HUFF CONCERT HALL

10 – 11 a.m.

### Breaking Barriers

**Teresa Hammonds** | Senior, Theatre | Fayetteville, N.C.

**Advisor: Evan Bridenstine**

The topics for my movement pieces cover addiction/abuse/violence/peace. This project is not a tutorial or a demonstration, but three separate performances of my work which I want to showcase and hopefully inspire other students to create works of art in the future. My inspirations for this project were mainly human emotion and motives and how good and evil are intertwined within us, but we have a choice whether to choose non-violence, compassion, and peace or go in a darker and easier route.



AFTERNOON SESSION | MU JOURNEY: STUDY ABROAD EXPERIENCE | ALUMNI DINING ROOM

2 – 3:30 p.m.

(Note: This presentation will fill the entire session)

**The Ultimate Journey**

**Ahmed Aljukhaydib** | Senior, Marketing & Business Administration with a minor in International Business | Onizah, Saudi Arabia

**Brianna Beck** | Junior, Social Work with a concentration in school social work | Greensboro, N.C.

**William Cameron Brewer** | Sophomore, Pre-Nursing | Wendell, N.C.

**Sierra Emanuel** | Junior, Biology | Lumberton, N.C.

**Kaitlynn Gray** | Junior, Social Work | Virginia Beach, Va.

**Erin Haley** | Senior, English | Mayfield, Ky.

**Samantha Hill** | Junior, Social Work | Beulaville, N.C.

**Alysa Hilliard** | Senior, Nursing | Osawatomie, Kan.

**Ann Mixon** | Junior, Social Work | Fayetteville, N.C.

**Taylor Owens** | Sophomore, Social Work | Roseboro, N.C.

**Kayleen-Marie Smithling** | Senior, Business Administration: Resort, Club, and Hospitality Management | Fayetteville, N.C.

**Jason Sparrow** | Junior, Computer Information Technology | Charlotte, N.C.

Advisors: Doris Munoz, Alysia McKenna, and Aimee Boyd

Twelve students, 7 days, 4 pathways, 1 Journey, and an unanticipated change to the entire plan. The original Ultimate Journey was made up of all four Methodist University Journey Pathways; however a public health crisis forced a change of location. After planning and coordinating an entire week long experience in Puerto Rico, connecting with Student Leaders in San Juan, and preparing presentations centered around Puerto Rican leaders, program participants were forced to engage in a real life application of leadership in reformatting their entire plan. The students conducted research centered on student leadership, connected with peer student leaders at the University of New Orleans, participated in a service project with students from the University of Alabama Birmingham, and have formed a panel to share their experience for the Undergraduate Research Symposium. The students will share their research findings of differences and similarities in student leadership, regarding time, involvement and perception of student leadership across campuses. This research presentation will demonstrate an on-campus application of the Study Abroad experience and show in detail how the Methodist University Journey can be pursued through alternative avenues.

## AFTERNOON SESSION | MATH | HENDRICKS 122

2 p.m.

### Codes in Higher Dimensions

**Samantha Scoggins** | Senior, Mathematics and Computer Information Technology | Wendell, N.C.

Advisor: Dr. Jie Zhou

In today's interconnected world, we rely extensively on error-free technology and communication. Ensuring a high fault tolerance has become more crucial within communications. Golay's codes have played a significant role in the research and development of error correction coding. The Perfect binary Golay Code and the Extended binary Golay Code, which actually "extends" from the former, are two such codes. This project will study and compare the origins, properties, and applications of the mentioned codes as they relate to areas within mathematics. In addition, the same method that created the Extended binary Golay code in 24-space from the Perfect binary Golay Code in 23-space will be explored and applied to finding a code in 25-Space.

2:30 p.m.

### Art of Balancing in Chemistry

**Emir Nazdrajjic** | Senior, Mathematics and Chemistry | Mostar, Bosnia and Herzegovina

Advisor: Dr. Jie Zhou

Understanding chemical reactions is a way of looking more closely at changes that occur in our everyday lives. Chemical reactions are represented by chemical equations. According to the law of conservation of mass; in a closed system, mass of the system must remain constant over time. In order to achieve this condition in chemical reactions, chemical equations must be balanced. Some chemical equations are easy to balance, some are more challenging. Most of the time, balancing chemical equation requires trial and error. There are many techniques that can be used to balance chemical equations. This research will show that chemical equations are actually mathematical equations. Moreover, this research will discuss how the method of matrix calculation can be used to balance a chemical reaction. This method sounds intimidating, but it is just a way of looking at chemical equation as system of linear equations. As mentioned, with balanced chemical equation, an individual can better understand the chemical reaction that occurs naturally. This is the first step of understanding the science in nature, and it is a very important one.

3 p.m.

### Encrypt My Cloud

**Moses Jackson Malish Sebit Chandiga** | Senior, Mathematics and Computer Science | Juba, South Sudan

Advisor: Dr. Jie Zhou

The advent of cloud computing has improved data storage, and also it limited the usage of in-house infrastructure (servers and data centers). However, software applications and data are growing exponentially, requiring larger cloud data centers and servers. This has led to an increase in the level of threats on data security, prompting the adaptation of efficient and secure cryptographic techniques like the Elliptic Curve Cryptography (ECC). ECC, based on the principle of elliptic curves defined over finite fields, is an example of asymmetric cryptography that uses shorter keys and easy implementation protocols in data manipulation. Implementing ECC requires finding the Elliptic Curve discrete logarithm (ECDL) of a random elliptic curve element with respect to a publicly known base point, creating a Trapdoor function. ECDL is significantly harder than factoring; hence, a more computationally intensive problem means a stronger cryptographic system. The security of ECC depends on the ability to compute a point multiplication, and the size of the elliptic curve determines the difficulty of the discrete logarithm problem. Hence, using Lenstra elliptic curve factorization algorithm, I will demonstrate how to find the ECDL value. In order to build a secure ECC protocol, my ECDL value has to be large enough so that its computation is made infeasible. For the purposes of understanding, I will set the constant parameters of the Elliptic curve equation to be smaller, and ECC will be defined over a smaller finite field.

AFTERNOON SESSION | HISTORY AND ENGLISH | HENDRICKS 222

2 p.m.

***Le donne forti: Sex, Marriage, and the Expression of Female Agency in Boccaccio's The Decameron***

Miranda Jade Friel | Senior, English | Alexandria, Va.

Advisor: Dr. Cristina Francescon

*Le forti donne* is an examination of Boccaccio's *Decamerone*. This collection of variously sourced tales, dating back to 1350, has stood the test of time thanks to its stories' depth and breadth. However, while *Il Decamerone* contains many tales that are racy and bawdy in nature, evidence of Boccaccio's complex attitude toward women can be found couched within several of his works. Defying conventional medieval standards, Boccaccio creates complex women who act on their sexual and romantic desires. Therefore, he demonstrates evidence of proto-feminist thought, establishing his position as a forerunner of feminist literature. This presentation explores four stories that range from the classic tale of Federigo's falcon to the mental and physical domination of la badessa over Masetto. By examining these two accounts side by side, one can explore the authors' literary treatment of the Native Americans and their own personal coping mechanisms. Rowlandson and de Vaca's responses to crisis vary due to their gender and their religious background. This difference illuminates the ideological paradigms they are operating from. Rowlandson, in her time of turmoil, clings tightly to her Bible and her Christian beliefs, but de Vaca embraces a new identity, only reestablishing himself as a Conquistador when he is reunited with his missing countrymen.

2:30 p.m.

**Fallen Angels, New Women, and Shakespeare's *Much Ado About Nothing*: Modern Stereotypes in the Elizabethan Era**

Stacy Pifer | Senior, English | Lawton, Okla.

Advisor: Dr. Emily Wright

This paper analyzes the primary female characters in Shakespeare's *Much Ado About Nothing* through the lens of the nineteenth- and early-twentieth century gender archetypes of the "Angel in the House," the "Fallen Woman," and the "New Woman." After defining these terms in the context of Victorian and post-Victorian society and literature, the paper proceeds to demonstrate that the characters Hero and Beatrice in *Much Ado About Nothing* exemplify Elizabethan versions of these modern archetypes.

3 p.m.

**The "Banality of Evil" in the Lives and Actions of German Prisoners During the Holocaust**

Cheri Molter | Senior, History, English and Writing | Fayetteville, N.C.

Advisor: Dr. Peter Murray

Many historians have discussed what Hannah Arendt called the "banality of evil" in relation to the behavior of the German officials who assisted in carrying out the Final Solution, which was to exterminate all European Jews through a program of mass annihilation. Explaining how some of the German officers were desensitized to the human pain and suffering around them in various concentration camps, some sociologists discuss the conditions that perpetuate an ideology of evil as ordinary. However, those authors have not analyzed the behaviors of the Holocaust prisoners to see if they, too, committed evil acts in an ordinary way to ensure their survival. A reading of multiple primary sources –written by Primo Levi, Olga Lengyel, Tadeusz Borowski, and Viktor Frankl – from Arendt's perspective of the banality of evil reveals that some imprisoned men and women were also desensitized participants in malicious behaviors. Many Holocaust inmates, most of whom were formerly law-abiding, religious individuals, participated in their barbaric environment by committing immoral deeds that ranged from trickery and stealing to murder, yet they were not monsters; they were men and women enduring intolerable pressure to conform to the expectations of a fundamentally immoral environment. On a daily basis, some inmates resorted to committing what were considered crimes in any other society; for those individuals, evil became as banal as it was to the Nazi German officers who were putting in another workday, killing or torturing thousands of people.



## AFTERNOON SESSION | ECONOMICS AND ACCOUNTING | NURSING 103

2 p.m.

### China's Dual System: How is Communism Compatible with a Free Market Economy?

**Daniel Sasfy** | Junior, Financial Economics | Budapest, Hungary

Advisor: Dr. Josiah Baker

This research aims to answer the question: How are China's capitalist export policies compatible with its communist domestic policies? The Chinese economy relies on high export revenues and a low level of import rates. In doing so, China tries to maximize profits and minimize its perceived costs (David Ricardo – comparative advantage). Consequently, China has developed a capitalist approach towards its export policies which is based on low taxes on exports, labor costs, and production costs (low wages), this is most prominently present in its Special Economic Zones (SEZs). However, domestically, China's political system is not free because it is based on a single-party communist model. All goods and services are controlled by the government, which includes enforcing five-year production plans. This paper will explain how these seemingly contradictory two systems cooperate to function as an export-oriented, but tightly controlled domestic economy. Ultimately, this study will try to reveal if China has managed to correct its economic communist ills, while still preserving its political order.

2:30 p.m.

(Note: This presentation will span two time blocks.)

### Auditing: The Misunderstood Function of Accounting An Informative Discussion Going behind the Scenes of an Audit

**David Szajnuik** | Senior, Accounting with a concentration in Professional Golf Management | Harrisburg, Pa.

**Mary Madison Kizer** | Senior, Accounting with a concentration in Business Administration | Fayetteville, N.C.

**Jason Wittcop** | Senior, Accounting with a concentration in Health Care Administration | North Tonawanda, N.Y.

**Francisco Garduno** | Junior, Accounting | Mexico City, Mexico

**Gina Gilman** | Senior, Accounting | Manila, Philippines

**Jake Lee** | Junior, Accounting | Barkhamsted, Conn.

**Olorato Condrad Mbi** | Senior, Accounting | Francistown, Botswana

Advisor: Professor Dena Breece

Methodist University is bridging the gap between college accounting students and real world experiences by allowing the advanced auditing class to engage in an audit of the Fayetteville Publishing Company. By completing the audit, not only do the students involved gain valuable resumé experience through experiential learning, but they are also able to share the experience with those that may be audited at any point in their business career. Sharing these experiences will provide clarity and simplicity to the negative stigma that comes with an audit to those that may know little about one. The audit process is made up of the following steps: the entrance conference; tests of the control environment, cash receipts, non-routine estimates, disbursements, and fixed assets; management representation letter; followed with an exit conference. The five major cycles of the audit (aforementioned steps 2-6) will be conducted in a similar manner, with students completing several tests to verify the various numbers and internal control sampled in each cycle. Each student involved with the audit will be assigned to one of the eight steps, and will be tasked to lead the group in various interviews and tests involved with their section of the audit. In conclusion, by completing the audit, students will issue a group opinion for the audit report, and also gain valuable experiential learning through each of their individual activities. These experiences will be shared through our panel discussion as we walk listeners through our process, and answer any questions they may have.

POSTER SESSION | UNION-ZUKOWSKI LOBBY

2 – 3:30 p.m.

**Atomic Absorption Analysis of Electrolyte Content in Sports Drinks and Food Products Utilized by Athletes for Muscle Cramp Relief**

**Katayoon Dowlatshahi** | Junior, Chemistry with a concentration in Biochemistry | Fayetteville, N.C.

Advisor: Dr. Stephanie Hooper-Marosek

The use of sports drinks and other food products have come to dominate the athletics industry as a means of electrolyte replenishment to improve physical exertion. The strenuous physical activity that athletes experience each day often results in the loss of essential electrolytes from their bodies through rapid perspiration. While these electrolytes contribute to the maintenance of the internal water balance, they also regulate the conduction of electrical signals across the nerves that direct muscle contraction and relaxation. In an attempt to prevent the occurrence of muscle cramping, many athletes rely on sports drinks and other remedies to reintroduce these vital electrolytes back into their bodies. Atomic absorption spectroscopy (AAS) was utilized in order to analyze the concentrations of the electrolytes that are critical to physiological function, including magnesium ( $Mg^{2+}$ ), calcium ( $Ca^{2+}$ ), sodium ( $Na^{+}$ ), and potassium ( $K^{+}$ ), in an assortment of popular sports drinks and food products that are commonly consumed by athletes. The analytes that were examined through AAS include dill pickle juice, sweet pickle juice, yellow mustard, apple cider vinegar, Powerade, Gatorade, Smart Water, E-Lyte Sport, and Propel. While the magnesium and the potassium concentrations differed quite considerably amongst the analytes, the calcium concentrations experienced less pronounced variations. In addition, sodium was observed to have the highest concentration in a majority of the analytes as it was heavily incorporated to promote rapid rehydration in an effort to regulate electrolyte balance. These electrolyte concentrations were further studied through a comprehensive evaluation of the recommended dietary allowance and the maximum daily intake levels for electrolytes in order to determine the most appropriate sports drink or food product that should be used by athletes to alleviate muscle cramps.

**Contamination of Water by Agricultural Wastes**

**Jobert Exsatel** | Senior, Environmental and Occupational Management with a concentration in Regulatory Compliance of Natural Resources | Cotes-de-Fer, Haiti

Advisor: Dr. Kurt Smith

During the last decades, the world is facing many environmental issues. Water pollution is one of the biggest challenges the environment is facing. As an environmental major and chemistry student, I am motivated in collecting the knowledge I have in both field to determine the relationship between the nitrogen basis fertilizer utilized in agriculture and water pollution. Ammonia ( $NH_3$ ) is a colorless gas found in high ratio in the agricultural fertilizers. Some studies show that nitrified particles can oxidize ammonium into nitrite ( $NO_2^-$ ) and then to nitrate ( $NO_3^-$ ) which are hazardous to human health when infiltrated into the water at high concentration. The ammonia is harmful to fish and other organisms living in the water. Taking into account the importance of both agriculture and water quality, as an environmental student, I propose the following alternatives to solve the problem in the most sustainable manner:

1. Increase buffer surface
2. Educate farmers so that they can be socially responsible
3. Create protected zone in area where aquatic species are believe to be threatened
4. Use permanganate test where water is contaminated in order to remove

## POSTER SESSION | UNION-ZUKOWSKI LOBBY

2 – 3:30 p.m.

### **Spectroscopic Environmental Analysis of Heavy Metal Contaminants in Water and Soil Samples from the Methodist University Campus and the Cape Fear River**

**Haily Haas** | Senior, Chemistry | Yankton, S.D.

**Cheryl Krupa** | Senior, Biology | Fayetteville, N.C.

**Elisabeth "Mila" DeSousa** | Junior, Biology | Comoro Kampung-Baru Dili, Timor Leste

**Advisor: Dr. Stephanie Hooper-Marosek**

In Fall 2015, the Environmental Chemistry (CHE 4300) class at Methodist University analyzed several local water and soil samples to determine the presence of several heavy metal contaminants. These contaminants could have a significant impact on the environment and the organisms that consume water or food from the collection sites. The water samples were taken from the Cape Fear River, the Hendricks Science turtle pond, as well as rainwater and analyzed for the presence of lead ( $Pb^{+2}$ ) and copper ( $Cu^{+2}$ ) contaminants. A separate experiment was also conducted using soil samples from various sites on the campus of MU to evaluate for the presence of manganese ( $Mn^{+2}$ ). Using Atomic Absorption Spectroscopy (AAS), the water samples were assessed for both  $Pb^{+2}$  and  $Cu^{+2}$  by preparing standard solutions, calibrating the instrument, and obtaining analytical data. Using Ultraviolet/Visible (UV/Vis) spectroscopy, the soil samples were evaluated to determine  $Mn^{+2}$  concentrations in the soil samples, following a laborious digestion procedure. Calibration standards and subsequent data were processed to determine the amount of  $Mn^{+2}$  present in each sample. The results for the concentrations of lead, copper, and manganese from the samples collected will be addressed along with the implications of each contaminant on the environment and potential sources of exposure. The methodology, data, parameters, results, pictures, and calibration figures will be displayed and explained in full detail.

### **Fluoride: Is It Safe to Drink?**

**Tracey Raupp** | Senior, Business Administration and Management | Lumberton, N.C.

**Advisor: Dr. Clay Britton**

The topic addressed in this research offers insight into aspects associated with fluoride, such as types, sources, common uses, marketing factors, financial reports, and the health effects potentially caused by the incorporation of fluoride in common products of necessity. Further research about fluoride leads into the question of water fluoridation essentially being a type of forced medical treatment when some believe the focus needs to be on educating individuals about proper dental hygiene and limiting the processing/sweetening of food. Currently, focus seems to be on masking the root issue of inadequate dental hygiene knowledge and habits by supporting a treatment affecting a vast amount of citizens unaware of what may be in their household drinking water and, occasionally, bottled water. This study compares the cost effectiveness of fluoridation verses better dental hygiene education, as well as objectively analyzing the pros and cons of fluoridated water.

### **Human Trafficking Is in Our Backyard**

**Rhodesia A. Taylor** | Sophomore, Social Work | Fayetteville, N.C.

**Advisor: Dr. George Hendricks**

Human trafficking is a worldwide problem that has impacted our local community. In 2009, Cumberland County, North Carolina dealt with a human trafficking tragedy in the case of Shaniya Davis. That case received national attention because of the circumstances Shaniya Davis faced before and after her kidnapping. The average age of a victim of human trafficking is twelve, but some victims – like Shaniya Davis – are much younger, and experts have noted that a human trafficker can make up to \$200,000 a year per each underage victim. This research proposal highlights the topic of human trafficking and gives special attention to the extensive physical and emotional damage experienced by the underage children of this crime. Topics to be explored include a discussion of how traffickers maintain their power and how supply and demand pertains to human trafficking. This proposal will also focus on how traffickers acquire and control their victims. A literature review will reveal the magnitude of the problem, but particular emphasis will be placed on how the problem manifests on the local level (Cumberland County, N.C.). This research proposal will also offer suggestions for increased community intervention.



## AN UPDATE ON THE CENTER FOR UNDERGRADUATE RESEARCH AND CREATIVITY Dr. Clay Britton, *Director*

The 2015-2016 academic year has been an exciting one for the CURC. The students, faculty and staff of the University have continued to embrace the mission of the Center, and continue to take advantage of the opportunities the Center provides. A few highlights from this year:

- ◆ Students have been awarded more than \$9,000 to assist them in their travel to conferences or to purchase supplies and equipment for their projects.
- ◆ Volume II of the “Monarch Review: Methodist University’s Journal of Undergraduate Research and Creativity” was released. Currently, the submission period for Volume III is closed and those papers are being reviewed. The submission period for Volume IV will be open soon!
- ◆ On April 1-2, Methodist University served as the host for the 113<sup>th</sup> Annual Meeting of the North Carolina Academy of Science. Our campus welcomed nearly 250 guests from around the state.

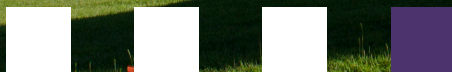
The development and implementation of all of these projects takes a great deal of hard work. I would like to take them time to thank each of the members of the CURC Advisory Board. They are:

- ◆ Professor Daniel Bennett, School of Science and Human Development
- ◆ Dr. Lori Brookman, School of Science and Human Development
- ◆ Dr. Del Crisp, *ex officio*
- ◆ Dr. Cristina Francescon, School of Arts and Humanities
- ◆ Mr. John Herring, School of Science and Human Development
- ◆ Dr. Eric See, School of Public Affairs
- ◆ Dr. Pam Strickland, Reeves School of Business
- ◆ Dr. Larry Wells, School of Arts and Humanities

I thank all of you, the Methodist University community, for helping make the efforts of the Center for UG Research and Creativity a success! Happy five-year anniversary!



METHODIST UNIVERSITY



JOURNEY



# MU JOURNEY UPDATE

## AN UPDATE ON THE LURA S. TALLY CENTER FOR LEADERSHIP DEVELOPMENT

**Dr. Andrew Ziegler, Director**

The Leadership Pathway presents students with multiple avenues for personal discovery, intellectual growth, and professional development. Here are some of the opportunities available to students interested in leadership:

### **General Shelton Leadership Challenge**

New this summer, the Tally Leadership Center is conducting a one-week, residential leadership camp on the Methodist University campus for high school aged students, July 17-22. Current MU students have the opportunity to work at the camp as peer mentor trainers. For more information, contact Doris Munoz at [dmunoz@methodist.edu](mailto:dmunoz@methodist.edu) or 910.630.7022.

### **Nationally-Known Guest Speakers**

James Robilotta will be back on campus this fall. Look for him Oct. 24 as he delivers the keynote for the Tally Speaker Series. Robilotta first spoke at MU in 2013, and students found his speaking style highly interactive and inclusive. James was not afraid to challenge everyone while keeping the audience laughing and engaged. For more information, contact Suzanne Langley at [atslangley@methodist.edu](mailto:atslangley@methodist.edu) or 910.480.8474.

### **Leadership Fellows Program**

Students committed to making a real difference in the world have an avenue for personal leadership development in the Leadership Fellows Program. Participation is through a nomination/selection process based on academic achievement, exceptional character, and commitment. Students interested in the program should ask a faculty or staff member to nominate them during fall semester. For more information, contact Dr. Andrew Ziegler at [azielger@methodist.edu](mailto:azielger@methodist.edu) or 910.630.7488.

### **Academic Courses and Minors in Leadership**

- ◆ LSS 3000 | Principles of Leadership (Students earn a certification in *The 7 Habits of Highly Effective People*)
- ◆ LSS 3400 | Contemporary Issues in Leadership
- ◆ LSS 3750 | Future Oriented Leadership
- ◆ And more

### **Off-Campus Leadership Conferences and Workshops**

- ◆ General Hugh Shelton Leadership Forum, North Carolina State University
- ◆ Student Leadership and Diversity Conference, University of South Carolina
- ◆ Leadercast, Simulcast from Atlanta to Johnston County Community College
- ◆ And more

### **On-Campus Leadership Programs**

- ◆ Student Leaders @ Methodist (SL@M)
- ◆ National Society for Leadership and Success (NSLS)
- ◆ Student Involvement Center
- ◆ And others

METHODIST UNIVERSITY



JOURNEY

## AN UPDATE ON THE CENTER FOR COMMUNITY ENGAGEMENT

**Rev. Kelli W. Taylor, Vice President of Community Engagement and Campus Ministry**

The Center for Community Engagement provides MU students the opportunity to become actively involved in supporting our local community. Participation in our local community allows our students to develop community awareness, social responsibility and personal growth.

The 2015-2016 academic year has been an exciting one for the Center for Community Engagement. This year's focus has been creating models of Community Engagement which extend beyond volunteerism to long-term, mutually beneficial partnerships for the community.

Monarch Tutors is an exemplary model of a Community Engagement success story. This program is an ongoing partnership among Hay Street United Methodist Church, Margaret Willis Elementary School, and Methodist University for the mutual benefit of elementary students, engaged volunteers and the greater Fayetteville community under the rubric of education. After one semester, the program multiplied from 12 tutors to 22 tutors with an additional 10 volunteers. This growth launched MU's involvement with The Pink Ladybugs, a partnership between Methodist University and Margaret Willis Elementary to provide mentoring for elementary age girls by teaching life skills and offering academic support in the community.

The Person Street Outreach involves multiple facets of the campus community in Martha's Table and Mary's Closet which serve the needs of the homeless, hungry, and poor. Individual campus departments as well as SGA, athletic teams and student organizations have volunteers in this partnership.

In addition, the Second Annual MU Day of Service involved 324 MU students volunteering in 10 agencies across the greater Fayetteville community including:

- ♦ Cumberland County Schools
- ♦ Designing Station
- ♦ Downtown Alliance
- ♦ Fayetteville Animal Protection Society
- ♦ Fayetteville Area Chamber of Commerce
- ♦ Fayetteville Parks and Recreation
- ♦ Fayetteville Urban Ministry
- ♦ City of Fayetteville
- ♦ Habitat for Humanity
- ♦ Hay Street Mentoring Initiative
- ♦ MU Day of Service
- ♦ Operation Inasmuch
- ♦ Our local community churches
- ♦ Our local small businesses
- ♦ Person Street Homeless Initiative
- ♦ Play4Kay
- ♦ Red Cross
- ♦ Relay for Life
- ♦ Fayetteville Beautiful Roadside Clean Up
- ♦ The Salvation Army
- ♦ Second Harvest Food Bank
- ♦ United Way of Cumberland County
- ♦ Winter Wonderland
- ♦ Wounded Warrior Project

The Center for Community Engagement also offers MU students the opportunity to participate in time-limited, problem-solving, community-based internships. These internships allow students to apply classroom knowledge to real world experience in the job market.

METHODIST UNIVERSITY



# MU JOURNEY UPDATE

## AN UPDATE ON THE CENTER FOR GLOBAL EDUCATION

**Dr. Cristina Francescon, *Director***

Global Education at MU uses a variety of vehicles in order to arrive at its destination: a more global and international community. The Center supports three areas in our Methodist community: Study Abroad, International Programs, and international activities on campus.

This year, the Center concentrated on some major programs and presentations. In the fall, an internationally renowned speaker was invited to campus to present on intersections of conflict resolutions through creative expression. In the spring, a Teach-In was organized to discuss refugee crises in the world. The Foreign Film Festival continues in popularity since its inception in 2004. This year, students who were familiar with the languages/cultures of the films were asked to give introductions to the films and to prepare food from the target countries prior to the film showings.

The Global Fellows program continues to expand. This year, a board composed of students was formed in order to go over the current requirements with the intent to make the program more accessible to other students. The Center continues to encourage both faculty and students to travel abroad. Support for faculty-led trips continues to improve by assisting faculty with logistical support for planning trips abroad with students. Students are continuously encouraged to go on Study Abroad trips.

Many of our international students at MU come from UWC schools worldwide as well as from other programs. The Center supports all activities of the Office of International Programs, from Pangea to the International Food Festival, to working with international students to help them to feel more at home.

The Center began in the fall semester of 2013 in order to highlight that an extended encounter with a foreign culture's different values and languages can teach us how to communicate across the barriers of customs, geography, and politics. When we talk about winning the hearts and minds of a people, we mean that we are familiar with the language, culture, values, religion, and history of that culture. Faculty and students who have studied abroad often return with a deeper understanding of other peoples, their own background, and of themselves. International students who come here to study offer new perspectives to students and faculty whether in or out of the classroom, and they have added to their expansion of cultural/linguistic knowledge by studying in the USA.

The Center for Global Education supports all of the above efforts with the goal that a global philosophical perspective will help students find their own place in the world.





# MONARCH REVIEW

METHODIST UNIVERSITY'S JOURNAL OF UNDERGRADUATE RESEARCH AND CREATIVITY

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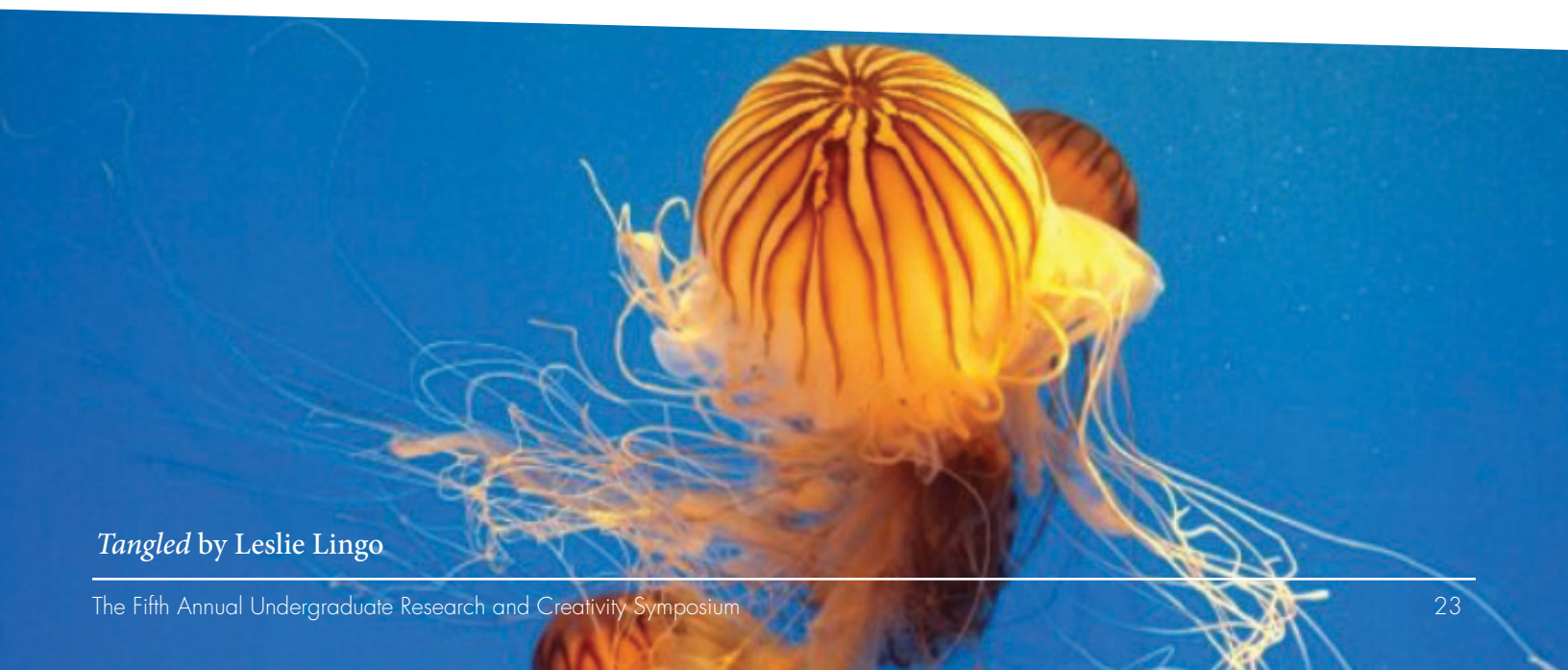
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