THE EIGHTH ANNUAL
UNDERGRADUATE RESEARCH
AND CREATIVITY SYMPOSIUM
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 8 – 11, 2019**

**Monday | April 8**

11:00 – 11:50 a.m. Faculty Presentations Locations vary

**Tuesday | April 9**

1:30 - 3:30 p.m. Second Annual Nursing Research and Community Symposium Nursing Building
6:30 – 7:30 p.m. A Presentation of Creative Work of WRI 3250 Students “Between the Lines: A Poetry Reading” PA Medical Lecture Hall

**Wednesday | April 10**

8:45 a.m. – 3:30 p.m. The Eighth Annual Undergraduate Symposium Locations vary
11:30 a.m. MU Chorale-sponsored Cookout Lawn area next to Hensdale Chapel
3:30 – 5:00 p.m. University Awards Ceremony Huff Concert Hall
7:30 p.m. Cape Fear New Music Festival: Music and the Physical World Matthews Ministry Center

**Thursday | April 11**

6:30 - 7:30 p.m. Methodist University Writing Center Presents "Exploring Your Erroneous Zones: Why Fact-Checking Matters" PA Medical Lecture Hall

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**CRC SYMPOSIUM AGENDA | APRIL 10, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>9:00 – 11:00 a.m.</td>
<td>Morning Session</td>
<td>See program for locations</td>
</tr>
<tr>
<td>11:00 - 11:50 a.m.</td>
<td>Rev. Kelli Taylor and Dr. George Hendricks: A Fresh Expression of “And Are We Yet Alive”</td>
<td>Matthews Ministry Center</td>
</tr>
<tr>
<td>12:30 – 1:30 p.m.</td>
<td>Special Presentations for the Cape Fear New Musical Festival: “Music and the Physical World”</td>
<td>Reeves, Room G2</td>
</tr>
<tr>
<td>12:30 p.m.</td>
<td>Dr. Stephanie Hooper-Marosek “The Elemental and Noteworthy Connections Between Chemistry and Music”</td>
<td></td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>Dr. Jie Zhou ”Numbers in Space and Time: From Ancient Greece to the 21st century”</td>
<td></td>
</tr>
<tr>
<td>1:30 – 3:30 p.m.</td>
<td>Afternoon Session</td>
<td>See Program for Locations</td>
</tr>
<tr>
<td>2:00 – 3:10 p.m.</td>
<td>Poster Session*</td>
<td>Berns Student Center</td>
</tr>
<tr>
<td>3:30 – 5:00 p.m.</td>
<td>University Awards Ceremony</td>
<td>Huff Concert Hall</td>
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*Posters will be displayed in the Berns Student Center beginning at 9:00 a.m. Students will be available for questions during the afternoon Poster Session.*
## Mathematics | Allison 121

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
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<tbody>
<tr>
<td>9:00 - 9:20 a.m.</td>
<td>Formula of the Hero of Alexandria</td>
<td>Elvis Kahric</td>
</tr>
<tr>
<td>9:25 - 9:45 a.m.</td>
<td>Volume of a Sphere, Cone, and Cylinder</td>
<td>Jacob Mireles</td>
</tr>
<tr>
<td>9:50 - 10:10 a.m.</td>
<td>Russell's Paradox</td>
<td>Alexandre Yano</td>
</tr>
<tr>
<td>10:15 - 10:35 a.m.</td>
<td>Venn Diagrams and Their Ongoing Relevancy as a Branch of Mathematics</td>
<td>Alfredo Midence</td>
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## Psychology | Alumni Dining Room

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>9:00 - 9:20 a.m.</td>
<td>The Effect of Media Priming on Individuals with Higher Rates of Anxiety</td>
<td>Rachel Cullen</td>
</tr>
<tr>
<td>9:25 - 9:45 a.m.</td>
<td>Perception of Famous Faces</td>
<td>Amirah Miller</td>
</tr>
<tr>
<td>9:50 - 10:10 a.m.</td>
<td>The Effects of Distress Tolerance and Anxiety on Mirror Tracing</td>
<td>Mary Dunn</td>
</tr>
<tr>
<td>10:15 - 10:35 a.m.</td>
<td>Technology Addiction: The Effects of Addiction While Using Social Media</td>
<td>Nelliyah Pearsall</td>
</tr>
<tr>
<td>10:40 - 11:00 a.m.</td>
<td>The Effect of Reactance on Social Attitudes</td>
<td>Akejah McLaughlin</td>
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## Education, Biology, Music, Politics in Media | Hendricks 122

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<tbody>
<tr>
<td>9:00 - 9:20 a.m.</td>
<td>Necessity of Experiential Diversity Training</td>
<td>Cristina Gillard</td>
</tr>
<tr>
<td>9:25 - 9:45 a.m.</td>
<td>Effect of Atmosphere Test Parameter Variation on the In Vitro Activity of CHIR090 Against <em>P. aeruginosa</em></td>
<td>Tehillah Chinunga</td>
</tr>
<tr>
<td>9:50 - 10:10 a.m.</td>
<td>Ethos, Pathos, and Music in Ancient Greece</td>
<td>Jordan Curry</td>
</tr>
<tr>
<td>10:15 - 10:35 a.m.</td>
<td>Politics in Entertainment with a Focus on “Captain America: Civil War” and its Comic Book Companion</td>
<td>Jonathan Cooper</td>
</tr>
<tr>
<td>10:40 - 11:00 a.m.</td>
<td>Importance of Media Literacy for Ordinary Consumers of Information</td>
<td>Kseniia Petrova</td>
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## Honors Program | Hendricks 222

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<tr>
<td>9:00 - 9:20 a.m.</td>
<td>Social Disorganization Theory and How It Relates to Crime and Punishment</td>
<td>Erin Johnson*</td>
</tr>
<tr>
<td>9:25 - 9:45 a.m.</td>
<td>The Music of Danny Elfman in Tim Burton’s Movies</td>
<td>Elizabeth Cox</td>
</tr>
<tr>
<td>9:50 - 10:10 a.m.</td>
<td>The Art of Alienation and Tim Burton</td>
<td>Karen Britton*</td>
</tr>
<tr>
<td>10:15 - 10:55 a.m.</td>
<td>Place Your Bets</td>
<td>Christopher Miller*</td>
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## Theatre | Huff Concert Hall

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</thead>
<tbody>
<tr>
<td>10:00 - 10:55 a.m.</td>
<td>Women and Men, Then and Now…Mostly on Stage</td>
<td>Michaela Kroll, Celeste Tice</td>
</tr>
</tbody>
</table>

## Finacial Economics, Social Work, Sports Management | Nursing 103

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<tr>
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<tbody>
<tr>
<td>9:00 - 9:20 a.m.</td>
<td>Helping or Hurting? The Economics of Secondhand Clothing in Africa</td>
<td>Wisdom Uwaifo</td>
</tr>
<tr>
<td>9:25 - 9:45 a.m.</td>
<td>An overview of Malaysia’s Strategies to Attract Foreign Direct Investment</td>
<td>Phonepaseuth (Tina) Sourinsack</td>
</tr>
<tr>
<td>9:50 - 10:10 a.m.</td>
<td>H.E.R.O. - Helping Everyone's Residential Outcome</td>
<td>Ciara Ward</td>
</tr>
<tr>
<td>10:15 - 10:35 a.m.</td>
<td>Factors Influencing Academic Success in African-American Students: The Impact of Attending a Historically Black College or University vs. a Predominantly White Institution</td>
<td>Bryana Berry</td>
</tr>
<tr>
<td>10:40 - 11:00 a.m.</td>
<td>The Consequences of Parental Pressure on Athletes</td>
<td>Joshua Deutsch</td>
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</tbody>
</table>

## ENG 4550: Senior Seminar in Literary Studies Spring Symposium Panel | Yarborough Auditorium

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<tr>
<td>9:00 - 10:10 a.m.</td>
<td>The Effectiveness of Comic Medium over Traditional Novels</td>
<td>Vrushali Thombare</td>
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<tr>
<td></td>
<td>The Role of Human Interaction in Slave Narratives</td>
<td>ChaQuandra Whitted</td>
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<tr>
<td></td>
<td>The Pedagogy of Shakespeare</td>
<td>Hunter Davis</td>
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<tr>
<td></td>
<td>The Psychology of Horror</td>
<td>Victoria Banks</td>
</tr>
</tbody>
</table>

*Represents membership in Phi Kappa Phi
# AFTERNOON SESSION

## Identity in World History | Allison 121

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>1:30 - 1:50 p.m.</td>
<td>19th Century Chinese Women: A Pet Project for the West</td>
<td>Nomfanelo Hlophe</td>
</tr>
<tr>
<td>1:55 - 2:15 p.m.</td>
<td>The Igbo Women of Nigeria: The Fight for Change</td>
<td>Donalyse Tyrell</td>
</tr>
<tr>
<td>2:20 - 2:40 p.m.</td>
<td>Han’gul: The Language of Korean Identity</td>
<td>Andrew Lester</td>
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## Psychology | Alumni Dining Room

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<tr>
<td>1:30 - 1:50 p.m.</td>
<td>Environmental Stimuli in Effects of Short-Term Memory</td>
<td>Jalen Anderson</td>
</tr>
<tr>
<td>1:55 - 2:15 p.m.</td>
<td>The Power of Humor: Lowering Test Anxiety in College Students</td>
<td>Emma Carter</td>
</tr>
<tr>
<td>2:20 - 2:40 p.m.</td>
<td>The Effects of Aromatherapy on State Anxiety in College Students</td>
<td>Chassidy Mathis</td>
</tr>
<tr>
<td>2:45 - 3:05 p.m.</td>
<td>Monolingual vs. Bilingual: How Cognitive Control Affects the Stroop Test</td>
<td>Imani Darden</td>
</tr>
<tr>
<td>3:15 - 3:30 p.m.</td>
<td>How Colors Are Associated with Moods</td>
<td>Takoda C. Bendolph</td>
</tr>
</tbody>
</table>

## Cybersecurity and Computer Science | Hendricks 122

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<tbody>
<tr>
<td>1:30 - 1:50 p.m.</td>
<td>USA Patriot Act and Digital Privacy</td>
<td>Erin Johnson</td>
</tr>
<tr>
<td>1:55 - 2:15 p.m.</td>
<td>Software for Data Protection: Encryption, Steganography, Integrity Validation</td>
<td>Davor Pranjic</td>
</tr>
<tr>
<td>2:20 - 2:40 p.m.</td>
<td>MU Monarchs Tutoring Website</td>
<td>Elvis Kahric</td>
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</tbody>
</table>

## Davis Projects for Peace | Hendricks 222

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<tbody>
<tr>
<td>1:30 - 1:50 p.m.</td>
<td>Davis Project for Peace: Technology as a Bridge Among Nations</td>
<td>Elvis Kahric</td>
</tr>
<tr>
<td>1:55 - 2:15 p.m.</td>
<td>Davis Project for Peace: Water is Life</td>
<td>Oxie Berchel Itoua</td>
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</tbody>
</table>

## Political Science | Nursing 103

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<tbody>
<tr>
<td>1:30 - 1:50 p.m.</td>
<td>Women in Politics: An Analysis of Global Data</td>
<td>Belma Rastoder</td>
</tr>
<tr>
<td>1:55 - 2:15 p.m.</td>
<td>Global Gender Income Inequality</td>
<td>Amanda Blevins*</td>
</tr>
</tbody>
</table>

## Modern Languages (Presentations will be in Spanish) | Trustees 109/110

<table>
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<tr>
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<tbody>
<tr>
<td>1:30 - 1:50 p.m.</td>
<td>Border Culture: El Paso, Texas and Ciudad Juarez, Mexico</td>
<td>Noemi Saenz</td>
</tr>
<tr>
<td>1:55 - 2:15 p.m.</td>
<td>An examination of Calisto’s Love in <em>La Celestina</em>: Is it Real or Not?</td>
<td>Haja Mohamed Nafe Ali</td>
</tr>
<tr>
<td>2:20 - 2:40 p.m.</td>
<td>A Study of Some Moral Themes in <em>Lazarillo de Tormes</em></td>
<td>Elias Rodriguez</td>
</tr>
<tr>
<td>2:45 - 3:05 p.m.</td>
<td>A Psychological-Sociological Analysis of <em>La Celestina</em>: Love Used as a Means of Causing Social Chaos</td>
<td>Ronal Campos Porras</td>
</tr>
</tbody>
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## International Students and University/Community Life | Yarborough Auditorium

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</thead>
<tbody>
<tr>
<td>1:30 - 2:15 p.m.</td>
<td>Panel: Cultural Conversations at Methodist University</td>
<td>Shaquille McNair, Kseniia Petrova, Graham Rogers, Makayla Valdez, Sara Smith</td>
</tr>
<tr>
<td>2:20 - 3:05 p.m.</td>
<td>Where We Are Now: The Presence and Importance of International Students to Universities and Colleges in the United States</td>
<td>Fernando Chivela, Siphumelele Njapa, Kseniia Petrova, Hallie Smith, Nomfanelo Hlophe, Favour Adejor-Omale</td>
</tr>
</tbody>
</table>


**PRESENTATION SCHEDULE**

**POSTER SESSION | 2:00 – 3:10 P.M.**

Posters will be on display beginning at 9:00 a.m. in the Berns Student Center. Students will be available for questions during the afternoon poster session.

### Undergraduate Posters

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison Hall</td>
<td>Brendan Banks, Scott Coleman, Sirjan Kalakheti</td>
</tr>
<tr>
<td>Berns Lobby Area</td>
<td>Brian Dixon, Henry Murray, Maria Bossa</td>
</tr>
<tr>
<td>Campus Bicycle Accessibility</td>
<td>Jacob Pressley, Christopher Walden, Troy Chavis, Jordan Younger</td>
</tr>
<tr>
<td>Berns Student Center</td>
<td>Nicholas Steckel, Xavius Capehart, Wesley Faw, Keon James</td>
</tr>
<tr>
<td>Rise Up</td>
<td>Terrence Duren, Joshua Brunson, Martavious Harris, Rashawn Green</td>
</tr>
<tr>
<td>Leading from the Constituency: The Student’s Voice</td>
<td>Erin Johnson*, Kyle Johnson, J. Wolbers, Bryson Pinkney</td>
</tr>
<tr>
<td>Lower Extremity Electromyography while Walking in the AlterG at Different Bodyweight Support</td>
<td>Paul Craig</td>
</tr>
<tr>
<td>GenX: What is it? Chemical Properties and Health Risks</td>
<td>Cason Verhine</td>
</tr>
<tr>
<td>Isaac Albéniz and the Classical Music World</td>
<td>Kaitlin Coltharp</td>
</tr>
<tr>
<td>Detection of Blood Concealed by Paint</td>
<td>Lisa Kasamba, Catia Dombaxe, Devan Walker</td>
</tr>
<tr>
<td>Comparison of Gunshot Residue Visualization with Alternate Light Sources and Infrared</td>
<td>Sarah Morello, Alycia Smentkiewicz, Patrick Wright</td>
</tr>
<tr>
<td>Quantitative and Spectroscopic Analysis of the Components of Gunshot Residue (GSR) Deposited at Various Distances Using Different Caliber Firearms</td>
<td>Alexander Wilcox</td>
</tr>
<tr>
<td>Quantitative Determination of Hemoglobin in Bloodstains over Various Time Intervals Using UV/Vis Spectroscopy and Chemical Enhancements</td>
<td>Stephanie Knox</td>
</tr>
<tr>
<td>Konigsberg Bridge Problem</td>
<td>Endashaw Tonja</td>
</tr>
<tr>
<td>Success and satisfaction from College Athletics: Mindset Matters!</td>
<td>Taylor Jackson</td>
</tr>
<tr>
<td>Online Internship Experience at LRT Sports</td>
<td>Jonathan Fintak</td>
</tr>
<tr>
<td>Carolina Panthers: Guest Relations Team</td>
<td>Jaime Logan</td>
</tr>
<tr>
<td>Cincinnati Reds Group Sales Intern</td>
<td>Aly Thomas</td>
</tr>
<tr>
<td>Student Participation in Externships versus Internships</td>
<td>Aviance Marks</td>
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<tr>
<td>Internship at Methodist University’s Office of Advancement</td>
<td>Elvin Espinoza</td>
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### Graduate Posters

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<tr>
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<tbody>
<tr>
<td>Effects of Plantar Massage on Postural Control in Patients with Chronic Ankle Instability</td>
<td>Alexandra Pepper, Doctor of Physical Therapy</td>
</tr>
<tr>
<td>Improving Gait and Independence in a Patient with Acute Stroke</td>
<td>Emily Bressner, Doctor of Physical Therapy</td>
</tr>
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*Represents membership in Phi Kappa Phi
Independent Double Checks
Candace Anderson
Implementation of Independent Double Checks in conjunction with the Rights of Medication Administration will help to reduce medication errors. Independent Double Checks are a cost-effective strategy to increase patient safety.

Outpatient Nursing Care for PTSD
Damian Boggs
Discussion on the holistic approach of nursing care in regard to its impact patients who are experiencing Post Traumatic Stress Disorder. Nurses can help identify patients who are suffering from PTSD.

Critical Care Nurse Burnout
Danielle Boggs
There are many different factors that affect critical care nurses and their ability and desire to remain in their field. Topics discussed include: how resilience affects a nurse's ability to cope with stress, psychosocial factors, and work-related scenarios that can increase the likelihood of nurse burnout.

Neurological Defects: SIDS
Melissa Brann
Exploration of the causation of Sudden Infant Death Syndrome has now shifted to correlate with the alterations of neurochemicals. The alteration of neurochemicals has been studied through various different means and can help to explain how the process of cardio respiration is altered.

Pressure Ulcers: 101
Marissa Carter
Pressure ulcers have a wide range of severity and must all be treated differently based on their characteristics. Incorrectly staged wounds lead to the use of improper treatment as well as a decrease in patient satisfaction and an increase in distrust of the staff and infection rate within the facility.

Nurse-to-Patient Ratio: Bottom Line
Shelly Coble
It has been more than a decade of nurses trying to seek regulation from the government on limiting the “nurse-to-patient ratio,” in hospitals, and nursing care homes. Increasing the nurse-to-patient ratio is linked to increasing mortality, morbidity, and decreasing the length of hospitalization, as well as decreasing readmission within 30 days of onset of illness.

Vasopressors: Septic Shock
Carolyn Coleman
One third of patients are admitted into the ICU with a form of circulatory shock, making it vital to understand the best vasopressors to use when increasing systemic and circulatory blood flow. The use of dopamine, phenylephrine, epinephrine and vasopressin during septic shock is analyzed to find the most effective agent when combating mortality.

War on the Mind
Sara Comrie
Women in the military since 2003 have experienced more direct combat than ever before. These women are coming home to families, husbands, and a significant period of adjustment. They transition out of the military and enter the military health system which begins the arduous task of diagnosing their Post-Traumatic Stress Disorder and finding the cause.

Breast Cancer
Amber Conrad
Breast cancer awareness is of upmost importance. Three important things of breast cancer awareness are breast self-examinations, and how they help with early detections and prevention.

It Purely Wicks It Away
Elizabeth Crutchfield
Women are at the greatest risk for hospital acquired infection from an indwelling urinary catheter. The PureWick External Female Catheter could be the answer.

Methadone: Heroin Craving Treatment
Kayla Cruz
Despite agreement that methadone maintenance treatment (MMT) is an effective and safe option for treatment of heroin dependency, there have been controversies about its influence on heroin cravings. The length of methadone treatment is indefinite and MMT is not deemed an abstinence therapy.

Cesarean Births Unleashed
Ti’Yona Decoteau
There are many benefits to decreasing cesarean sections. The cost to patients and hospitals, mothers’ mental health and mother-baby bonding and attachment may all be affected. When using proper guidelines, vaginal births encompass many benefits.

Pet Therapy: Pediatric Autism
Erika Ellis
The benefits of using pet therapy are reduction in anxiety and improvement of social skills in pediatric patients with autism spectrum disorder. Currently, the acceptance of pet therapy within the medical milieu remains controversial as to the effectiveness of this form of alternative therapy.

Children with Muscular Dystrophy
Sarah Ewin
Children with muscular dystrophy lose their ability to ambulate by age 15, and five years later, their lifespan dissipates around age 20. An examination of preventive treatments, early diagnosing, and medication regimens that are effective in order to prolong the quality of life for children.
Mandatory Flu Vaccines and Health Care Workers
Matthew Gatling
Health care workers are highly exposed to influenza in health care settings. Mandatory HCW influenza vaccinations proactively provide for protection of self, patients, and our family members.

Baby-friendly Initiative: Disparities
Jamie Gee
The research on breastfeeding dates back decades, yet the breastfeeding rate globally is only 44 percent immediately post birth with these rates declining with time post-partum. The baby-friendly initiative meant to increase breastfeeding rates, however, implementation is lacking and disparities prevail.

Emergency Room: Wait Times
Ryan Hardy
Many people become frustrated with the amount of time they must wait in the emergency room. There are several causes for prolonged wait times, and this project explores these possible causes.

Diabetic Foot Ulcers and Smartphones
Shira Lampman
The implementation of smartphone applications in telemedicine may enhance the effectiveness for continuous monitoring of diabetic foot ulcer wounds. Integrating this application into current health systems may provide expeditious assessments and treatments that could potentially reduce further complications and provide patients with opportunities for enhanced quality of life and improved wound care outcomes.

Nurse-to-Patient Ratios: Patient Outcome and Nursing Careers
Kathy McGlothen
The outcomes of nurse-to-patient ratios and the effects on both patients and nurses are imperative. Currently, there are pros and cons regarding different ratios, workload, the work environment while highlighting specific healthcare issue and benefits for both the patient and the nurse. Low nurse-to-patient ratios have been linked to improved patient outcomes.

Vaccinations: The Fight
Madeline McWilliams
There are two different camps on vaccinations: pros and cons. The pro on vaccination is that the more people who vaccinate, the better is the protection of the population.

Emergency Department Use
David Onyiego
The use of Emergency Departments for emergency versus non-emergency healthcare is increasing. There is a direct correlation by increased rates and ethnicity.

Micro-Preemies: The Tiniest Humans
Nicole Richiez
Micro-Preemies are defined as infants born at 28 weeks or less. These preemies typically weigh 1,000 g or less and are often at significant risks for future health challenges. Survival is key.

Nurse Fatigue
Hannah Sellers
Nurse fatigue is an ongoing issue that affects nurses physically, emotionally, and mentally. Insufficient sleep, extended work hours, and consecutive shifts have been identified as major contributors. These factors can also affect patient safety and the quality of care provided.

The Sweet Smell of Healing
Mallory Stonesifer
Lavender has been used for thousands of years as a form of natural medicine. Studies are showing that lavender contains properties that decrease the time it takes for burn patients to heal physically and mentally.

Ventilated Associated Pneumonia Prevention
Mekides Tamerat
In the U.S., up to 27 percent of ventilated ICU patients develop Ventilation Associated Pneumonia during their hospital stay and will only have 50 percent likelihood of survival. Nurse-driven preventive measures for VAP includes oral hygiene, hand hygiene and head of the bed elevation.

Critical Care: Caring for the Family
Jake Terry III
Family-centered care is of utmost importance within critical care units. Focusing on the barriers to providing family-centered care, how to overcome the barriers, and the importance of family-centered care within critical care units.

Minimizing Postoperative Ileus: Alvimopan
Ashton Walker
Alvimopan is now being used for postoperative patients. With new and improved pharmacologic management of pain, Alvimopan has been used to reduce pain after surgical procedures.
The Eighth Annual Undergraduate Symposium
April 10 | 9:00 a.m. - 3:30 p.m.

MORNING SESSION | MATHEMATICS | ALLISON HALL 121

9:00 – 9:20 a.m.

Formula of the Hero of Alexandria
Elvis Kahric | Senior; Computer Science and Mathematics; Cazin, Bosnia and Herzegovina
Advisor: Dr. Kathy Fick, Mathematics

Was mathematics invented or discovered? Questions like this have intrigued mathematicians and philosophers for ages, in order to solve some of the world's most known problems. The Hero of Alexandria, or just Hero, was born in 150 BC in Ptolemaic, Egypt. Based on the historical sources, we are only familiar that he existed; his real name and contribution are still somehow a mystery. In this research, I will be showing the contribution of Hero by presenting the so-called Hero's formula for calculating the area of triangles. The formula he was using is different than the conventional formula we are using today.

Nowadays, Hero's formula has shown its applications in everyday solutions. The location in which this philosopher and mathematician lived is considered to be one of the places that produced many individuals who contributed on a large scale. Hero's geometrical formula was represented in his book called Metrica, under proposition 1.8. Hence, this research will be conducted based on the proofs from this book. Throughout the project, proof and applications of the formula will be presented, in order to explain the mathematics of the past.

9:25 – 9:45 a.m.

Volume of a Sphere, Cone, and Cylinder
Jacob Mireles | Senior; Junior; Computer Science and Mathematics; Fayetteville, N.C.
Advisor: Dr. Kathy Fick, Mathematics

This talk will describe the relationship of the volume of a cone and cylinder and how they are both used to derive the formula for the volume of a sphere. Archimedes' use of the volumes of cones and cylinders, as well as the area of a circle and triangle, will be used to show the derivation of the volume of a sphere. Along with the use of the volumes of cones and cylinders, Archimedes' use of the method of exhaustion will be explained and demonstrated to show how he was on the verge of discovering the basic concepts of calculus almost 1,800 years prior to its discovery by Isaac Newton.

9:50 – 10:10 a.m.

Russel’s Paradox
Alexandre Yano | Senior; Mathematics; Luanda, Angola
Advisor: Dr. Kathy Fick, Mathematics

Imagine how hard it would be to find an item at the store or any market if the items were not organized by sections. How long would people take to find their items before walking every single aisle to find what they need? It might seem impractical to imagine a situation like that, as it would lead to enormous chaos. Now, because each item has property, therefore it must belong to a set of elements that has that same property. For example, a computer is an electronic device and will more than likely be in the electronics section. Based on this premise, I will examine set theory and, more specifically, Russel's paradox, in which the definition of naive set theory is analyzed. According to naive set theory, given a property, there exists a set of elements containing all objects that have that property. Russel's paradox demonstrates the looseness of this definition which leads to a contradiction. This research presentation aims not only to explain what the Russel paradox is but also to challenge the general audience to think outside of the commonly known set of rules. The Russel's paradox demands the creation of a new set of rules or axioms as it cannot be addressed within the mathematical frame in which the sets are defined. So, Russel's paradox challenges the common idea that because x has a specific property, then it must belong to a set A which is a set that holds all elements with that property.

10:15 – 10:35 a.m.

Venn Diagrams and Their Ongoing Relevancy as a Branch of Mathematics
Alfredo Midence | Junior; Mathematics; Tegucigalpa, Honduras
Advisor: Dr. Kathy Fick, Mathematics

Venn diagrams have been a mathematical topic seen by students since elementary school but they should not be underestimated. Venn diagrams have been a useful model in showing logical relations between collections of different sets. They originated from a branch of mathematics known as Set Theory. John Venn was one of the first mathematicians to survey and formalize their usage; nevertheless, he did not call the diagrams Venn, but Eulerian Circles. This idea was first introduced in 1866 when Venn published The Logic of Chance. In this research, I will be showing John Venn's contribution to the mathematical world with his Venn diagrams, making an observation at how the concept changed from when he was using the Eulerian Circles, and its relevance to contemporary society. Venn diagrams have been used in many applications and have proven to be the most proficient way to organize any data collection and observe its relations; such as differences and similarities between sets. Thus, this research will help me share how to organize information visually and how this is most useful in the world of mathematics. Venn Diagrams are used across many other, disciplines making them a wide, useful and relevant subject.
The Effect of Media Priming on Individuals with Higher Rates of Anxiety
Rachel Cullen | Senior; Junior; Psychology, Clinical Psychology; Pinehurst, N.C.
Advisor: Dr. Katharine Snyder, Psychology

Anxiety has been shown to produce a variety of comorbid psychological conditions, as well as impact the overall physiological health of an individual (American Psychological Association, 2018). Yet, there is less information on how anxiety affects an individual's cognition and the role this disorder might play in malleability of compliance. Over 55 percent of news stories within the United States directly link mental illness and violence, as opposed to only 14 percent of news stories showing mental illness in a favorable light (McGinty, Kennedy-Hendricks, Choksy, & Barry, 2016). As anxiety increases in trait across generations within the United States (Twenge, 2000), it is important to evaluate the potential relationship these two subjects might have. Participants will first be asked to self-report their level of anxiety through the Taylor Manifest Anxiety Scale (Taylor, 1953), then they will be exposed to a fictitious report from the New York Times. Priming will then be evaluated using the presence or absence of a mental illness label, namely schizophrenia. Participants will then be assessed by the Implicit Association Test on Mental Illness and Danger. The IAT allows researchers to measure unconsciously learned stigma without relying on self-report. It is hypothesized that those participants who self-report higher levels of anxiety will be more susceptible to news reports depicting a mental illness prime and therefore show a higher level of bias on the Implicit Association Test. Implications of the present study in regards to the effect of priming and potential reductionistic interventions will be discussed.

Perception of Famous Faces
Amirah Miller | Senior; Psychology and Sociology; Pittsboro, N.C.
Advisor: Dr. Katharine Snyder, Psychology

The purpose of this study is to explore neuropsychological factors related to the perception, recognition, and identification of well-known famous faces. The Famous Faces Test is used to measure how well a person can recognize a well-known famous face with non-marking features. The face only includes the circular oval area around the eyes, nose, and mouth. Other features such as hair, ears, glasses, etc. are not shown. Prior research has shown that our ability to perceive faces depends upon our capacity to mentally manipulate objects. Research has also shown that there is a specific region of our brain (fusiform face area) that plays a key role in our capacity to identify upright faces. When the faces are inverted, we cannot rely on this region and its connections as much. We recognize patients with a neurological facial recognition condition called prosopagnosia. In the present study participants will be measured under three conditions; The famous faces test (upright or inverted), Mental Rotation Test (S.G. Vandenburg, 1971), and the Epworth Sleepiness Scale (Johns MW, 1991). It is hypothesized, for this study, that individuals viewing the upright will have higher identification than those who are looking at inverted faces. Also, it is anticipated that there will be a significant correlation between MRT and sleep. Whether the person had prior knowledge of the famous individual is controlled for. Implications of the present study will add to the neuropsychological assessment literature and promote an understanding of the challenges that patients with prosopagnosia experience.

The Effects of Distress Tolerance and Anxiety on Mirror Tracing
Mary Dunn | Senior; Psychology with a concentration in Counseling Clinical Psychology; Mount Olive, N.C.
Advisor: Dr. Katharine Snyder, Psychology

This study is to examine the effect of distress tolerance and anxiety on college students. Students are under a lot of stress and many have anxiety, which could possibly affect their thinking processes and their performance in school. Participants will be given the Distress Tolerance Scale to assess an individual's capacity to adapt and cope effectively with life stressors (Gaher & Simons, 2005). The Taylor Anxiety Scale will also be given to assess the state of present anxiety that the participant has coming into the study (Taylor, 1953). Once the surveys are completed subjects will then be given a Computerized Mirror Tracing activity (Illinois, n.d.), which has been shown to be one of the best measures of distress tolerance (Bernstein, Leyro, Vujanovic, & Zvolensky, 2010). In summary, this study will help determine the relationship between anxiety, distress tolerance, and performance on a well-known neuropsychological measure (Mirror Tracing). It is important to examine the effect that stress and anxiety have on the processing information on the brain, especially for college students. Future research can be done to examine other physical factors that might affect information processing in the brain.

Technology Addiction: The Effects of Addiction While Using Social Media
Nelliyah Pearsall | Senior; Psychology; Wilmington, N.C.
Advisor: Dr. Katharine Snyder, Psychology

The purpose of the present study is to access how excessive social media use can become an addiction component among college students. Social media addiction will be looked at in relationship to personality (introversion/extroversion). Prior research suggests that individuals higher in the trait of extroversion may engage in greater levels of addiction on social media usage. Participants will take the Kiersey Personality Test, which provides scores for the following aspects of personality: introversion versus extroversion, sensing versus intuition, thinking versus feeling, and judging versus perceiving. This will be followed by the Social Media Questionnaire, whereby subjects will be given 10 questions showing various social media-related questions that evaluate social media addiction. The Life Satisfaction test will demonstrate the way subjects feel about life. In conclusion, participants will view the Kiersey Temperament Scale, Social Media Usage Questionnaire, and the Life Satisfaction Scale to determine their adequate using, why they might use it, and self-actualization components of life. It is anticipated that participants scoring higher in extroversion will generate higher scores on addiction to social media. Future research will discuss which social media websites are used most commonly, the amount they are used, and what personality dimensions are found used the most. Current research on the effects of social media over-usage will also be addressed.
The Eighth
believed that certain modes could affect human emotion in a positive or be held responsible for the feelings one felt while listening to them. It was Advisor: Dr. Scott Marosek, Music
Junior; Music Performance (Voice); Fayetteville, N.C.

JORDAN CURRY
Ethos, Pathos, and Music in Ancient Greece
these patients, and once acquired, chronic infection will almost always the major pathogen in the Cystic Fibrosis lung. Prevalence is high in
Pseudomonas aeruginosa, an
multi-drug resistant bacteria worldwide. is linked to the incidence of hospital-acquired infections caused by
life spans by changing the outcome of bacterial infections. The crisis medicine and surgery (Gould, Ian M, Abhijit) and extending expected
Advisor: Dr. Lori Brookman Cornwell, Biology
Senior, Biology with a concentration in Health
Care; Lilongwe, Malawi

TEHILLAH CHINUNGA
Necessity of Experiential Diversity Training
America is a land of diversity, yet there exists racial disparity in discipline resulting in more office referrals. This disparity contributes to the lack of future educational attainment among various ethnic nationalities. The zero-tolerance policy and other punitive policies create further racial disparity. The attitudes and perceptions teachers have about their students and their behaviors also have a significant impact on student achievement. The racial disparity shows the need for preservice and current educators to receive extensive training and interaction with various ethnicities and cultures. This training should be experience based and involve experiences with persons from all ethnicities. This will enable them to more objectively evaluate student behavior and thus begin to close the achievement and discipline gap. A culturally rich preparation program will prepare teachers to teach the diverse students of America, creating a positive global system where all are respected, valued and treated equitably.

AKEJAH MCLAUGHLIN
The Effect of Reactance on Social Attitudes
Humans have the inclination to maintain autonomy in decision-making. Simply, we like having a choice. The goal of this study is to assess the relationship between social attitudes and reactance. Reactance is the motivation to reclaim freedom of choice after it has been threatened or eliminated (Brehm, 1989). Prior research suggests that individuals with high reactance rates have an emotional arousal to restore autonomy. Participants will respond to a Stroop test primed to evoke reactance and answer one of two driving scenarios. Reactance will be triggered or elicited when subjects read a paragraph whereby the character is not given a choice about speeding (Condition A). Likewise, in the control condition, subjects will read a paragraph that offers a choice as to whether the character will speed or not (Condition B). Following this, participants will be exposed to the Hong’s Reactance Scale and a social attitude questionnaire. Implications of this study regarding how reactance impacts social attitudes will be discussed.

CRISITINA GILLARD
Effect of Atmosphere Test Parameter Variation on the In Vitro Activity of CHIR090 Against P. aeruginosa
Antibiotics have played a pivotal role in achieving major advances in medicine and surgery (Gould, Ian M, Abhijit) and extending expected life spans by changing the outcome of bacterial infections. The crisis of antibiotic resistance has resulted in the need to address the lack of treatment options for these problematic pathogens. Antibiotic resistance is linked to the incidence of hospital-acquired infections caused by multi-drug resistant bacteria worldwide. Pseudomonas aeruginosa, an example of Gram-negative bacteria that are multi-drug resistant, is the major pathogen in the Cystic Fibrosis lung. Prevalence is high in these patients, and once acquired, chronic infection will almost always ensue (Davies, Jane C.). The objective of this study was to determine the effects of different in vitro test conditions on the minimal inhibitory concentration values of an LpxC inhibitor, CHIR090. LpxC inhibitors are new-type antibacterial agents developed in the last 20 years, mainly against Gram-negative bacteria infections (Ding, Shi, et al). A total of 40 isolates of Pseudomonas aeruginosa from the Novartis collection, obtained from various geographic locations, were used in these studies. Antibiotics tested included ciprofloxacin, tobramycin (USP), and colistin (Sigma). The determination of MICs (the lowest concentration of the drug that inhibited visible growth of bacteria) was performed using a standard broth microdilution assay according to Clinical Laboratory Standards Institute (CLSI M07-A11) recommendations. Growth curve experiments were performed against P. aeruginosa ATCC 27853. In summary, change in incubation atmosphere did not have effect on the in vitro activity of ciprofloxacin, whereas CHIR090, tobramycin and colistin each had distinctive changes of their in vitro activity for most but not all of the strains.

ETHOS, PATHOS, AND MUSIC IN ANCIENT GREECE
In Ancient Greece, it was theorized that specific types of music could be held responsible for the feelings one felt while listening to them. It was believed that certain modes could affect human emotion in a positive or negative manner. By researching Ancient Greek theorists, philosophers, and their ideas, I gained a better understanding of the modes that were used in specific social settings or not at all. To test their theories, I conducted a case study with two extant musical works from this era. The “Epitaph of Seikilos” was written in the Phrygian mode, which was believed to elicit a feeling of happiness or positivity. Mesomedes’ “Hymn to the Muse” was written in Lydian mode, which Ancient Greek theorists believed would make the listener feel sad or elicit the feeling of lamenting. My research concluded that the Ancient Greeks’ theories were incorrect because both songs had a positive effect on participants’ emotions.
ABSTRACTS

MORNING SESSION | EDUCATION, BIOLOGY, MUSIC, POLITICS IN MEDIA | HENDRICKS 122 (CONTINUED)

10:15 – 10:35 a.m.
Politics in Entertainment with a Focus on “Captain America: Civil War” and its Comic Book Companion
Jonathan Cooper | Junior; Senior; Digital Forensics & Cybersecurity & Mass Communications; Boone, N.C.
Advisor: Sabrina Koncaba and Karla Weinbrenner, Digital Forensics & Cybersecurity
This research addresses the politics in media, specifically comic books and comic book movies, and how media has to be politicized.

10:40 – 11:00 a.m.
Importance of Media Literacy for Ordinary Consumers of Information
Ksenia Petrova | Sophomore; Mass Communications with a concentration in Journalism; Priozersk, Russia
Advisor: Dr. Kevin P. Swift, Mass Communications
This research paper covers the topic of media literacy. These days, people tend to trust online media sources more than traditional media outlets. However, they often lack media literacy – ordinary people largely do not know what they are supposed to do with the information they are given and how they can interpret it. In the world where information is so accessible, it is important to understand and to distinguish what the information sources are talking about. Hence, it is necessary for all members of modern society to know at least basics of media literacy. Through real life examples, surveys conducted and statistics provided, this research paper highlights the main aspects of how one can become a media literate consumer of information.

9:00 – 9:20 a.m.
Social Disorganization Theory and How It Relates to Crime and Punishment
Erin Johnson | Senior; Digital Forensics and Cybersecurity; Phoenix, N.Y.
Advisor: Dr. Jennifer Rohrer-Walsh and Dr. Richard Walsh, Honors Program
Social disorganization theory the theory that talks about how where you live effects a person’s relationship to crimes, can be shown in the works of the Great Books. Crime and Punishment by Fyodor Dostoevsky gives a tangible example of social disorganization theory at work. When Raskolnikov moved to the city from the country, he moved from an area where crime was not frequent, to the city where there was crime at every corner of his neighborhood. Living in this “lawless” area created the stage for the rest of the book. This is similar to areas in Fayetteville area that have higher crime rates due to their location. An example would be the intersection of 210 and 87 in Spring Lake with pawn shops and other run-down businesses.

The research for this paper is going to combine looking further into the social disorganization theory and looking for evidence of the theory in example in other works similar to Crime and Punishment. I will also be showing how social disorganization is seen in the areas around Fayetteville.

9:25 – 9:45 a.m.
The Music of Danny Elfman in Tim Burton’s Movies
Elizabeth Cox | Sophomore; Music Performance (Voice); West End, N.C.
Advisor: Dr. Jennifer Rohrer-Walsh and Dr. Richard Walsh, Honors Program
Danny Elfman is one of the best known film composers of our time. He is the go-to composer for renowned director Tim Burton, and has become an essential part of the Burton aesthetic. My presentation, “The Music of Danny Elfman in Tim Burton’s Films,” addresses how Elfman’s music supports Burton’s overall themes of alienation and acceptance. Through the use of some basic music theory, like the use of minor keys, dissonance, and atonality, it explores how Elfman’s music plays a critical role in how audiences view Burton’s films. The presentation explores three of Burton’s films, Batman, Beetlejuice, and Edward Scissorhands. All of these movies have characters who are outcasts from society and deal with how society rejects and accepts them. Through this presentation, I will use examples from the film score of Elfman’s work to support the claims on how the music affects the audience.

9:50 – 10:10 a.m.
The Art of Alienation and Tim Burton
Karen Britton | Junior; Graphic Design; Fayetteville, N.C.
Advisor: Dr. Jennifer Rohrer-Walsh and Dr. Richard Walsh, Honors Program
For my Honors class, we are watching movies directed by Tim Burton that include the theme of alienation. I had the opportunity to examine his art style and to create a presentation for the class. Art can be subjective, but somehow Burton is able to capture the sense of being “othered” (i.e., alienated) in his art so that his audience is able to experience the feeling that is so essential in his films. My presentation explains if Burton’s style contributes to the sense of alienation. My research involved finding works by Burton and other artists who may have possibly inspired him. I also researched art movements and Burton’s background to determine the events in his life that may have inspired his artistic approach. Through my research, I discovered that Burton is not the first artist to focus on the topic of alienation, but he is the most successful. Burton made the concept of being different easily digestible for people of all ages. The stories Burton gives these odd characters are what makes the style of his art so impactful. My presentation goes in depth on why Tim Burton’s art is important to many people today. Burton creates art for the people who feel like they do not fit in. The process he takes to create his characters is personal, but it also stems from a long line of artists and their contributing art styles. Burton is known to many as a director, but first and foremost, he is an artist at heart.

10:15 – 10:35 a.m.
This research was to find time frames for two specific pieces of comic media, and compare them in a logical and emotional way. This was to prove that in order to give certain social issues a little more pull, they needed to be emotionally connected to characters that are seen favorably in the public eye. The implications of this study was to show how it is necessary for media to politicize, and how it isn’t a new occurrence for things to be political. This will change how modern media is taught.
The Eighth men are not allowed in many of the shelters for families. This however, contributing factors for single family homes in the homeless category is the age of 18 that are currently suffering from homelessness. One of the homeless females and 41 percent homeless males with children under families. This signals an alarming single parent family rate of 60 percent: Tracey Hinds, Social Work Advisor.

Ciara Ward | Senior; Social Work; Washington, DC
Advisor: Tracey Hinds, Social Work
In the United States, 34 percent of the homeless population are families. This signals an alarming single parent family rate of 60 percent homeless females and 41 percent homeless males with children under the age of 18 that are currently suffering from homelessness. One of the contributing factors for single family homes in the homeless category is men are not allowed in many of the shelters for families. This however, does not help the homeless family’s stability issue, neither does it reduce the amount of people suffering from homelessness. Nationally, 43 percent of the homeless community is African-American. (Green Doors, 2018). Therefore, the H.E.R.O. program is necessary. Creating a program that enforces keeping all dynamics of the family together would be the objective, therefore, developing policies and regulations that provide benefits for the father along with the mother so that no contributing factor of the family is excluded. This would create a two-parent income in the home in many cases.

H.E.R.O.- Helping Everyone’s Residential Outcome

The Eighth Annual Undergraduate Research and Creativity Symposium
ABSTRACTS

Factors Influencing Academic Success in African-American Students: The Impact of Attending a Historically Black College or University vs. a Predominantly White Institution

Bryiana Berry | Senior; Mass Communications with a concentration in Journalism, Tacoma, Wash.
Advisor: Dr. William Dabney, Social Work

African-American academic success research has primarily focused on the differences between white students and black students in their collegiate settings, providing little context on how academic environment affects African-American student success individually. This study explored factors that influenced academic success in African-American students attending a predominantly white institution and those attending a historically black college or university, specifically examining the perceptions of discrimination and the self-reported academic success of each student. A total of 40 self-identified African-American college men and women completed an in-depth survey interview assessing discrimination, academic atmosphere, and academic success as determined by GPA. A correlative analysis revealed that the relationship between the type of college attended and GPA was present, as was the relationship between perceptions of discrimination and the type of college attended. The results of this study add to the current literature involving factors that influence African-American student success. This study provides suggestions for future research on this topic and can inform institutes of higher education about the challenges African-American students face in different educational settings.

The Consequences of Parental Pressure on Athletes

Joshua Deutsch | Sports Management with a concentration in Professional Tennis Management; Alexandria, Ind.
Advisor: Dr. Denny Scuton; Sports Management

As specialization in sport becomes an increasingly popular route for children to take at an early age, it also increases the chance that the sport chosen may not be their favorite. Parents are becoming increasingly proactive in their children's athletic lives, whether to live their failures through their kid's successes or to live up to their legacy. As the cost to attend college increases, there is likely more of a push for kids to strive to be the best they can be in one sport and get a free college education. Through pressure from parents, children will suffer in a mental and emotional way, rather than physical, as a result of only being allowed to play and practice one sport that their parents have chosen for them. The three topics researched will be on the children's mental state when they are playing their sport, how their mental state from sports affects their day to day life, and the rate of burnouts as a result from pressure from parents. How does their mental state affect their work ethic or performance? How is their happiness and success in other activities affected from their lack of care playing sport? How much does pressure cause athletes to stop playing a sport? This topic has been increasingly popular in discussions with coaches, professors, and advisors. After researching this topic, I will be able to answer whether pressure from parents creates or increases a poor mental state in children.

The Eighth Annual Undergraduate Research and Creativity Symposium

Victoria Banks will address the following questions: Why do we, as humans, love horror so much? Why are horror stories, horror films, and adaptations of classic horror novels such rapidly growing industries? What are the purposes of horror? With these questions in mind, what are the effects of the horror genre on the brain? Humans tend to gravitate toward, and actively seek out, things that cause adrenaline rushes and even sheer terror from the time that we are young. There are horror books and films for children and adults alike. And of course, horror did not just start with Mary Shelley's *Frankenstein* (1818) or Bram Stoker's *Dracula* (1897)—in fact, the telling of spooky, macabre tales for both explanation and enjoyment dates back to the ancient times of oral tradition. The fascination for this genre is seemingly ingrained in our minds, and this paper seeks to explore why we keep coming back to horror, particularly from a psychological perspective.

MORNING SESSION | ENG 4550: SENIOR SEMINAR IN LITERARY STUDIES SPRING SYMPOSIUM PANEL

YARBOROUGH AUDITORIUM

9:00 – 10:10 a.m.

Vrushali Thombare | Junior; English; Khubavali, India
ChaQuandra Whitted | Junior; English; Fayetteville, N.C.
Hunter Davis | Junior; English Education; Lillington, N.C.
Victoria Banks | Senior; English; Newport, N.C.
Advisor: Dr. Cameron Dodworth, English

This panel consists of the current students in the senior capstone course for English, and the following presentations are abbreviated discussions of each student's Bachelor's Thesis research paper, in the form of an academic conference paper presentation.

Vrushali Thombare's presentation will discuss two sets of graphic novels: Marjane Satrapi's *Persepolis* and *Persepolis II: The Story of a Return*, as well as Art Spiegelman's *Maus I* and *Maus II: A Survivor's Tale: And Here My Troubles Began*. Vrushali's presentation explores how Satrapi's and Spiegelman's texts succeed in transmitting and translating intense issues like gender inequality, racism, and religious extremism, as well as issues related to alcohol and drugs, via a graphic novel format, rather than a more traditional form of writing. Vrushali argues that this use of a comic/graphic novel medium actually enhances the format, rather than a more traditional form of writing.

Particular attention will be paid to the concept of African culture, trickery, coding, and the continuing effect that these issues and slave narratives have on African-American culture to this day.

Hunter Davis will discuss the pedagogy of Shakespeare in her presentation. In particular, Hunter's paper addresses the debate over the inclusion of the study of Shakespeare in secondary English. Some educators want to remove his works from the curriculum for various reasons: The plays are over 400 years old and are no longer relevant and students have difficulty reading and understanding the language Shakespeare uses because it is not written in contemporary English. Hunter's presentation addresses these points of contention and justifies the inclusion of Shakespeare in secondary education, while focusing on issues related to language, cultural relevance, performance, and pedagogical methods.

Victoria Banks will address the following questions: Why do we, as humans, love horror so much? Why are horror stories, horror films, and adaptations of classic horror novels such rapidly growing industries? What are the purposes of horror? With these questions in mind, what are the effects of the horror genre on the brain? Humans tend to gravitate toward, and actively seek out, things that cause adrenaline rushes and even sheer terror from the time that we are young. There are horror books and films for children and adults alike. And of course, horror did not just start with Mary Shelley's *Frankenstein* (1818) or Bram Stoker's *Dracula* (1897)—in fact, the telling of spooky, macabre tales for both explanation and enjoyment dates back to the ancient times of oral tradition. The fascination for this genre is seemingly ingrained in our minds, and this paper seeks to explore why we keep coming back to horror, particularly from a psychological perspective.
The Eighth Annual Undergraduate Research and Creativity Symposium

ABSTRACTS (In order by session, room, and time)

AFTERNOON SESSION | IDENTITY IN WORLD HISTORY | ALLISON HALL 121

1:30 – 1:50 p.m.

19th Century Chinese Women: A Pet Project for the West
Nomfanelo Hlophe | Junior, Biology with a concentration in Health Care; Nhlangano, Kingdom of Swatini
Advisor: Dr. Karen Kletter and Dr. Carl Dyke, History

Travelling to another country with the perception that one is superior was a common practice among Protestant missionaries who made their way into China in the 19th century. They hurriedly pointed out what they believed to be gruesome and backward according to their western standards. Protestant missionaries took it upon themselves to play the role of savior for Chinese women who practiced foot binding. The Chinese woman was considered obedient, passive, and oppressed. Their one and only chance of jumping out of that box was for them to be submissive to the Protestant missionaries, and their submissiveness could only be proved and validated by conversion to Christianity and becoming anti-foot binding advocates. The superiority complex of missionary women did to a great extent help Chinese women in that their pain and suffering came to an end when foot binding was successfully abolished. The question remains whether this superiority complex cost them in return, as they did not show great enthusiasm in advocating against their own corsetry. Possibly, had missionary women searched for the similarities they had with Chinese women, they could have recognized their own shortcomings in the West.

1:55 – 2:15 p.m.

The Igbo Women of Nigeria: The Fight for Change
Donalyse Tyrell | Junior, Biology; Clayton, N.C.
Advisor: Dr. Karen Kletter and Dr. Carl Dyke, History

A common misconception of Nigerian woman is that they did not wield much power historically. However, Nigerian women not only had political power, but also stood up and fought for their power when it was threatened by colonial rule. Igbo women in particular not only stood up to protect their own rights to power, but also stood up against the mistreatment of their people as a whole. There were multiple important demonstrations conducted with the goal of bringing about political change in Nigeria, including the 1925 Nwaobiala Movement, the 1929 Women’s War, and the Anti-Tax Demonstrations of the 1930s. These protests were conducted in order to end the exclusion, exploitation and wrongful taxation of Igbo women and Igbo people. The difference between the colonial and pre-colonial treatment of Igbo women should be understood in order to see the situations Igbo women were placed in from their perspective.

2:20 – 2:40 p.m.

Han’gul: The Language of Korean Identity
Andrew Lester | Senior; Nursing; Watertown, N.Y.
Advisor: Dr. Karen Kletter and Dr. Carl Dyke, History

Pre-modern China exerted immense influence, politically and culturally, over Korea, which both embraced and resisted aspects of Chinese culture. Korea’s elite sought to adapt Chinese political and philosophical ideas as well as Chinese language, though not without resistance. Through the lens of literary and linguistic evidence, this paper considers the significance of the development in the fifteenth century of a uniquely Korean script as a response to Chinese cultural encroachment.

AFTERNOON SESSION | PSYCHOLOGY | ALUMNI DINING ROOM

2:40 – 2:55 p.m.

Environmental Stimuli in Effects of Short-term Memory
Jalen Anderson | Senior; Psychology; Emporia, Va.
Advisor: Dr. Katharine Snyder, Psychology

The purpose of this experiment is to assess how outside environmental variables affect student learning. In particular, the effect of background music compared to silence will be evaluated. As a college student, studying, memorizing, and learning are crucial for success in school. Many students believe that listening to their preferred pre-selected musical choices help them study, but is this really the case? Past research has shown that individuals who are musically trained show better working memory abilities than those who are not (University of Toronto, 2004). This result is potentially caused by enabling participants to focus attention better while listening to their preferred musical selections in the background. During the present study students will complete a reading comprehension task with or without preselected preferred background music. Implications for study skills training and learning environments will be discussed.

1:30 – 1:50 p.m.

Environmental Stimuli in Effects of Short-term Memory
Jalen Anderson | Senior; Psychology; Emporia, Va.
Advisor: Dr. Katharine Snyder, Psychology

The purpose of this experiment is to assess how outside environmental variables affect student learning. In particular, the effect of background music compared to silence will be evaluated. As a college student, studying, memorizing, and learning are crucial for success in school. Many students believe that listening to their preferred pre-selected musical choices help them study, but is this really the case? Past research has shown that individuals who are musically trained show better working memory abilities than those who are not (University of Toronto, 2004). This result is potentially caused by enabling participants to focus attention better while listening to their preferred musical selections in the background. During the present study students will complete a reading comprehension task with or without preselected preferred background music. Implications for study skills training and learning environments will be discussed.

1:55 – 2:15 p.m.

The Power of Humor: Lowering Test Anxiety in College Students
Emma Carter | Senior; Psychology; Parkton, N.C.
Advisor: Dr. Katharine Snyder, Psychology

The purpose of the present study is to assess the relevance of humor on learning. Prior research has suggested that when humor is incorporated in the classroom, students retain information better and perform at a higher level on tests. Participants will be randomly placed in one of two conditions. In the control condition, subjects will be given a pre-test and post-test on statistical probability (the test curriculum) with the addition of humor. In the experimental condition, subjects will be given the same pre-test and post-test on statistical probability, with the addition of a neutral stimulus (non-humorous). The Positive and Negative affect Scale (Watson, Clark, and Tellegen, 1988) and the State Trait Anxiety Scale (Spilberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) will also be administered to assess the relationship between humor, state anxiety, and mood. In conclusion, it is anticipated that higher post-test scores will be associated with the humor condition. The implication of the present study is that educators who incorporate more humorous examples in their presentation of lessons may better promote learning in their students.
The Effects of Aromatherapy on State Anxiety in College Students

Chassidy Mathis | Senior; Psychology with a concentration in Clinical/Counseling; Rose Hill, N.C.

Advisor: Dr. Katharine Snyder, Psychology

The purpose of this study is to determine if color and mood associate with one another. The association between color and mood within the psychology field has been a topic of interest, and the pool that information will be gathered from will be undergraduates at Methodist University (ages 18 years or older). Participants will choose from two colored pencils (one a lighter shade and the other a darker shade) to symbolize brightness and energy (mood) in the experiment. The participants will use the colored pencil of their choice to complete the neurological assessment named the “Rey Complex Figure Test” (RCFT; See Meyers and Meyers, 1995). Following this, two mood inventories will be given. The first being the Positive and Negative Affect Schedule (Crawford and Henry, 2004) and then the Hamilton Depression Rating Scale (HAM-D; Helmreich et al., 2010). The prediction of this experiment is that the participants that choose the darker colored pencil will get a higher score on the mood inventories and may do poorer on the RCFT. The participants who choose the lighter colored pencil may score lower on the mood inventories and higher on the RCFT. This study will involve some implications that may affect this experiment like setting and the time of day.

Monolingual vs. Bilingual: How Cognitive Control Affects the Stroop Test

Imani Darden | Junior; Psychology with a concentration in Clinical/Counseling; Kinston, N.C.

Advisor: Dr. Katharine Snyder, Psychology

It is said that speaking a second language enhances an individual’s decision-making skills, it makes multitasking easier, as well as improves memory. Those individuals who speak a second language have a higher chance of receiving a job than those who don’t. That is because speaking a second language helps close gaps between language barriers. The purpose of this study is to explore the differences in levels of cognitive control between bilinguals and monolinguals. This research is meant to imply that bilinguals have an overall advantage on lexical executive control tasks.

How Colors Are Associated with Moods

Takoda C. Bendolph | Senior; Psychology with a concentration in Clinical/Counseling; Camden, Del.

Advisor: Dr. Katharine Snyder, Psychology

The use of aromatherapy, particularly lavender, has been previously shown to reduce anxiety levels within individuals. This study focuses on the use of aromatherapy via inhalation to reduce state anxiety within college students, which will be assessed by the State Trait Anxiety Test Form Y-1 (STAT; Spielberger, 1977). The State Trait Anxiety Test (Form Y-1) allows researchers to measure the level of self-reported state anxiety.

USA Patriot Act and Digital Privacy

Erin Johnson | Senior; Digital Forensics & Cybersecurity; Phoenix, N.Y.

Advisor: Karla Weinbrenner, Digital Forensics & Cybersecurity

The world changed on September 11, 2001 for all Americans. The way people use the internet and how they are tracked using the internet has fundamentally changed. There are people and organizations that have told the world about these changes, such as Edward Snowden and Anonymous. This paper is going to explain how these changes may not be in the best interest of the American people. There are rights that the United States Constitution protects on paper. These protections get lost in the implementation of new laws with a goal of keeping the country safe. Some of the areas in jeopardy are the Fourth Amendment right against unreasonable search and seizure. Another area is the Fifth Amendment right to due process and against self-incrimination. The last right that is in jeopardy is the First Amendment. The USA Patriot Act of 2001 was put into place in a time when technology was changing rapidly and some of the changes that have happened were shaped by parts of the USA Patriot Act of 2001. The research was conducted by looking at appellate court decisions on different parts of the law. The USA Patriot Act of 2001 was the basis for many of the digital laws that have been passed and are still used today. Today people take for granted that there is no such thing as digital privacy and this is secondary to these laws.
Software for Data Protection: Encryption, Steganography, Integrity Validation
Davor Pranjic | Senior; Computer Science; Mostar, Bosnia and Herzegovina
Advisor: Dr. Terry House, Computer Science

While developing software solutions for different companies, I was also required to train employees on how to protect the company data and sensitive customer information. That is the moment I realized that there is a need for software that will be as simple as possible for inexperienced users, and which will provide the latest security measures. By investigating the most common mistakes made by employees at the companies, I got a clear picture of the requirements for such software that will meet the standard operating procedures for maintaining the security of data. As a result, I created DataSec - a software that provides its users with Data Encryption, Data Integrity Verification, Steganography, and Password Assistance tools. An additional requirement was that the software is platform-independent due to the fact that employees use different operating systems.

MU Monarchs Tutoring Website
Elvis Kahric | Senior; Computer Science and Mathematics; Cazin, Bosnia and Herzegovina
Advisor: Dr. Terry House, Computer Science

The Tutoring Center does not have an automated scheduling system in which students can search for help by subject, tutor, time or date. The solution to this problem was to create a website to schedule a tutoring appointment. The MU Tutoring Center website will be a user-friendly, interactive application that will allow students as well tutors to better manage student their appointments. The application will also assist the tutoring supervisors and statistical overview, required for administration of the school. Based upon the research conducted for this project, and the interviews with the head of MU Tutoring Center, Mr. Quincy Malloy, the unique solution is a website (web-app) for the MU Tutoring Center.

The research question: Is it possible to develop a website where students can approach tutors, make appointments as well as rate the tutors on behalf of their experience. Hence, have a statistical overview of the performance? Can the research and surveys will allow the supervisors and administrators to keep an updated track of MU Tutoring Center progress?

All data together with specific requirements will be easy to access. Currently, I am working as a supervisor for the MU Tutoring Center. This position affords me the opportunity to gain valuable insight about the tutors as well as the schedules of each individual person employed by the Center. The website will be implemented with the use of HTML, CSS, PHP, JavaScript and MYSQL database.
Davis Project for Peace: Technology as a Bridge among Nations

Elvis Kahric  |  Senior; Computer Science and Mathematics; Cazin, Bosnia and Herzegovina
Marko Rojnica  |  Senior; Marketing, Financial Economics, and Entrepreneurship; Bosnia and Herzegovina
Advisor: Lyle Sheppard, International Programs

No story about Bosnia and Herzegovina can be started without the mention of its history, and how it impacts the present. The country in which WWI had started, has had many conflicts throughout its history, dating centuries back. One of more recent events that scarred the country for good was the Bosnian War that lasted from 1992 – 1995. It was a bloodbath between three constituting nations (Bosniaks, Serbs and Croats). Ever since then, many non-governmental and governmental organizations have tried, and to an extent succeeded, to promote peace and unity among the three nationalities. Since there is still an extent of mistrust between people, there is a lot of work to be done, and that is where we, as UWC students, have a role to play. As graduates of United World College in Mostar, and BiH citizens, we feel obliged to help to the best extent possible. The UWC Davis Peace Project is the perfect opportunity for us to show gratitude for the chance we have been given as UWC Alumni, which we intend to use to promote education as a tool for creating a better future of our country, and our people.

In 2018, technology plays a huge part in our everyday lives, and it can be the opening gate for a better future. This is the reason we wish to invest in our youth, and their knowledge of technological tools which they can use to get ahead in life. There are many schools in rural regions, which do not have the basic tools to utilize technology to their advantage. Hence, our aim is to enable young students (middle school and high school level) the access to required technological tools. These tools will allow us to engage and teach them basic skills based on which they can further develop their skills with the help of their mentors. Once this goal is accomplished, the second phase of the project will start, which includes a summer camp where the students will interact and share their experiences with other students from Bosnia and Herzegovina, Germany, and other European countries.

Davis Project for Peace: Water Is Life

Oxie Berchel Itoua  |  Senior; Biology; Brazzaville, Congo
Advisor: Lyle Sheppard, International Programs

Thirty-five kilometers away from Brazzaville in the Republic of Congo is Kintélé, a district located in the rural area where I grew up. There are three primary Schools located in the Kintélé district that do not have water fountains or boreholes for students to drink or use water when they need it. Water is an important necessity as it affects our lives both directly and indirectly. I still remember going to school when I was younger without knowing how I will be drinking water when I get thirsty. In the Kintélé district most students never finish their class hours because they have to go back to their houses whenever they need water. Teachers have been complaining about students missing classes and the increase in number of absences every year. The students who are the most affected by this lack of water at school are girls. In the Republic of the Congo, people believe that girls are the ones that do the house work, such as cooking and fetching water. Thus, girls stay at home, so they can cook and fetch water so that their brothers and other family members can drink when they come home from school. As a result, the number of girls in schools is very low compared to the number of boys. Even the girls who are in schools do not perform well because they have little time to revise for tests as they are required to do all the house chores, which includes fetching water. I want to create an equal and friendly atmosphere between students at school and improve the value of girls in the society. I would like to take this opportunity to provide water fountains in the three schools located in Kintélé. I believe that this project will improve education and equality among students.
The relationship between government and citizens exists. When citizens have a higher percentage of women parliamentarians. Also, the level of globalization also appeared to significantly affect the percentage of women legislators. Surprisingly, the education had a minor effect on the percentages of women legislators while the countries whose citizens had an opinion of males as better leaders had a significant negative effect on the percentages of women in the parliaments. Other variables such as predominant religion showed very little influence on the numbers of politically engaged women.

The findings of this study could be useful in solving the issue of women's underrepresentation in the governments around the world by defining the barriers to women's involvement in politics and the arenas in which the countries should implement the positive action mechanisms to overcome such barriers. In general, one would expect this research to aid in overcoming the gender gap in the global politics and motivate more women to actively engage in the political lives of their countries.

Global Gender Income Inequality
Amanda Blevins | Senior; Political Science; Fayetteville, N.C.
Advisor: Dr. Andrew H. Ziegler, Jr., Political Science
This study employed a quantitative analysis of public records to examine how gender income inequality in a nation relates to other conditions in a nation. A secondary analysis of numerous surveys, including Human Development Reports and World Values Survey, was conducted. To efficiently measure global gender income inequality, income inequality is contrasted with gender equality to provide a comprehensive measure of income disparities alongside other characteristics of nations.

The major findings were that social and political factors were less influential regarding income equality than gender equality. The social factors, education enrollment, and racism, proved to not have an explicit effect on income inequality. Level of globalization was more influential for income inequality than other political factors, which include type of government and level of freedom. In nations with democratic governments or high levels of political and civil freedoms greater income equality is observed. Concerning gender equality, both social and political factors are influential in affecting gender equality. Nations that have higher education enrollments and less racism are likely to have higher gender equality. In addition, nations that have democratic governments, high levels of political and civil freedoms, and high globalization are likely to exhibit increased gender equality.

As policy makers and nations pursue their agendas, these findings may be useful in identifying potential areas of improvement and support for policies that reduce gender income inequality. In general, one would expect that nations increasing their globalization measures would see less income inequality and more gender equality.

Why Are Some Nations More Supportive of the Rights of Their Citizens?
Daniella Amstamer | Senior; Political Science; Hod HaSharon, Israel
Advisor: Dr. Andrew H. Ziegler, Jr., Political Science
This study applied an empirical, quantitative, comparative analysis of data to examine the factors that may influence the quality of government in a nation. A secondary analysis of the Global file, in LeRoy's 8th ed. MicroCase, was conducted.

The most notable findings in the research were that social factors, such as multi-culturalism and gender equality, were more influential on governance quality than economic, political, and geographic factors. A nation's quality of government is likely to be superior when a trusting relationship between government and citizens exist. When citizens have better access to resources, such as the internet, education, and employment, it portrays an increase in government's allowing for citizens to express their voice, regarding political, civil, and human rights. Variables such as multi-culturalism, independence date, region, and the type of war a nation may have experienced, do not have great influence on the quality of government.

Political, civil, and human rights are the responsibility of the government to protect and provide safety for its citizens. Therefore, it is beneficial to research why some nations may seem more privileged than others in the sense of having the freedom to express themselves. It can be expected that for a nation to politically, socially, and economically develop, a stable government must be in place and must be an institution that its people can trust and rely on.
Human beings are constantly experiencing weird feelings that do not always have a concrete explanation. These feelings are simply unexpected reactions, and they play an essential role regarding our daily actions and behaviors. Feelings, such as love, have been extremely difficult to define and explain. They play an essential role in our daily actions and always have a concrete explanation. These feelings are simply unexpected: Dr. Cristina Francescon, Modern Languages and Literature Advisor

| Junior; Marketing, Spanish, and Business Economics; Misiones' Province, Argentina |

Elias Rodriguez: Love Used as a Means of Causing Social Chaos

Ronal Campos Porras

Human beings are constantly experiencing weird feelings that do not always have a concrete explanation. These feelings are simply unexpected reactions, and they play an essential role regarding our daily actions and behaviors. Feelings, such as love, have been extremely difficult to define due to the different dimensions these feelings have and depending on the individual. One of the most important characteristics to consider when someone falls in love is desire. This paper focuses on a psychological-sociological analysis of the book *La Celestina* by Fernando de Rojas. In this book, many of the characters' actions and behaviors are led by the need to fulfill their sexual desires, causing social chaos, such as Calisto's, Sempronio's, and Parmeno's death, together with Celestina's murder, and Melibea's suicide. These characters act and behave based on sexual favors and economic benefits that may come as a consequence of their decisions. By doing so, they forget about their moral values and personal beliefs.

Border Culture: El Paso, Texas and Ciudad Juarez, Mexico

Noemi Saenz | Sophomore; Graphic Design; El Paso, Texas

Advisor: Dr. Javier Pabón, Modern Languages and Literature

This project is a video presentation created for the Spanish Grammar and Conversation class. It is a 10-minute video narrated in Spanish. It reveals the side of a border unknown. Exploitation, crime, femicide and drugs feed immensely to the morbidity of public opinion. The border culture is much more and deeper than that, it constitutes a community of all types of people often help each other (provides a hand to others). People come and go, few stay. The name of El Paso translated to “the pass” is not a mistake. Ciudad Juarez and El Paso are considered sister cities. Why and How? I explain the origins of this border, and how is it that its residents view these border cities in which one of them was so tainted in front of the whole world.

An Examination of Calisto’s Love in La Celestina: Is it Real or Not? (Una examinación al amor de Calisto en La Celestina: ¿verdadero o no?)

Haja Mohamed Nafe Ali | Junior; Global Studies and Spanish; Smara Refugee Camp, Algeria

Advisor: Dr. Cristina Francescon, Modern Languages

This is a literary analysis based essay. It examines the nature of the love that Calisto claims towards Melibea in the medieval-renaissance literary work *La Celestina*. The purpose of this essay is to challenge the love of the protagonist Calisto and investigate if his feelings are real or not; that is if they are sincere or simply lust. The author Fernando de Rojas highlights many factors that can be looked at in depth to accomplish this investigation. Therefore, my analysis looks at some signs that support the thesis of this essay which claims that Calisto does not love Melibea but he admires her beauty and he needs her as he is feeling lonely. He effortlessly tries to win the love of Melibea by using money (golden chain) to hire a bawd or witch (Celestina) in order to get what he wants. This clearly demonstrates that Calisto is looking at Melibea as if she is an object that he can easily buy with his wealth. There are also other signs which prove that the thesis is correct, such as the fact that Calisto needs someone to help him overcome his loneliness and the confusion that he experiences when it comes to his feelings.

A Study of Some Moral Themes in Lazarillo de Tormes

Elias Rodriguez | Sophomore; Business Administration and Financial Economics; Misiones’ Province, Argentina

Advisor: Dr. Cristina Francescon, Modern Languages and Literature

The novel *Lazarillo de Tormes* belongs to the genre known as the picaresque novel. It is an anonymous novel published in Spain in the middle of the 16th century and gets its title from the main character of the same name. A pícaro is a type of rogue defined as such for being clownish, daring, and sassy. The characters in the picaresque novels were often used as a measure of morals or immoral behavior in the Spain of the past, but it is important to note that the novel is open to a lot of criticism of the society of that time, especially directed toward the Church and its hypocrisy.

A Psychological-Sociological Analysis of La Celestina: Love Used as a Means of Causing Social Chaos

Ronal Campos Porras | Junior; Marketing, Spanish, and Business Administration; Guanacaste, Costa Rica

Advisor: Dr. Cristina Francescon, Modern Languages and Literature

This project is a video presentation created for the Spanish Grammar and Conversation class. It is a 10-minute video narrated in Spanish. It reveals the side of a border unknown. Exploitation, crime, femicide and drugs feed immensely to the morbidity of public opinion. The border culture is much more and deeper than that, it constitutes a community of all types of people often help each other (provides a hand to others). People come and go, few stay. The name of El Paso translated to “the pass” is not a mistake. Ciudad Juarez and El Paso are considered sister cities. Why and How? I explain the origins of this border, and how is it that its residents view these border cities in which one of them was so tainted in front of the whole world.

El Paso – Juárez, with more than 2.7 million people, this binational region is the second largest metropolitan area on the U.S.-Mexico border (first being Tijuana and San Diego). Juarez-El Paso is the largest and binational bilingual region in the Western Hemisphere.

The region's history and the reasons for its division - that started as one - are very well linked with U.S. and Mexican history.

The fluid of migrants to this region starting as early as (migration goes back to 3000 B.C), continued through the 1600s, continues with the Bracero program during World War II followed by the Maquiladoras when the United States companies sought to establish their factories in Mexico. As shown by the beginnings, for its location, this is a constantly moving-changing region.

An Examination of Calisto’s Love in La Celestina: Is it Real or Not? (Una examinación al amor de Calisto en La Celestina: ¿verdadero o no?)

Haja Mohamed Nafe Ali | Junior; Global Studies and Spanish; Smara Refugee Camp, Algeria

Advisor: Dr. Cristina Francescon, Modern Languages

This is a literary analysis based essay. It examines the nature of the love that Calisto claims towards Melibea in the medieval-renaissance literary work *La Celestina*. The purpose of this essay is to challenge the love of the protagonist Calisto and investigate if his feelings are real or not; that is if they are sincere or simply lust. The author Fernando de Rojas

The novel deals with a very poor young boy who lives in the streets of Toledo, Spain, but in order to survive he must beg and turn to other means in order to find a place to lay his head and to eat. That means that he must rob, trick, and/or work for others for barely a piece of bread. This is usually what the picaresque figure had to do by necessity in order to survive. In my paper, I will examine the survival of a young boy, Lazarillo, through these ‘immoral’ means and through my thesis, it will become clear that his survival was dependent on performing acts considered immoral, so therefore, I question if these deeds were truly immoral. At the same time, the hypocrisy of the Church and its “morality” in the society of the time will also be examined.

The Eighth Annual Undergraduate Research and Creativity Symposium
Panel: Cultural Conversations at Methodist University
Shaquille McNair  |  Sophomore; History; Fayetteville, N.C.
Ksenia Petrova  |  Sophomore; Mass Communication; Priozersk, Russia
Graham Rogers  |  Sophomore; App Forensic Science; Wilmington, N.C.
Makayla Valdez  |  Junior; Kinesiology; Fayetteville, N.C.
Sara Smith  |  Senior; Mass Communication; Fayetteville, N.C.
**Advisor:** Dr. John W. Edwards II, Applied Communications

Under the direction of Dr. John Edwards students in ACL 3600, Exploring Cross-Cultural Communication, held conversations with international students and workers about their experiences in moving to a new country and integrating into the culture of Methodist University and Fayetteville, N.C. Based upon these conversations, this panel compared the individual experiences of these individuals with theories of cultural communication found in the literature. While this panel does not claim that individual experiences can be generalized to the greater population, this panel will discuss obstacles, cultural biases, culture shock/challenges, and other experiences international travelers have coming into our community from other countries. Dr. Edwards will introduce the panel and will be respondent to the panel. A question and answer session will follow the panel presentation.

Where We Are Now: The Presence and Importance of International Students to Universities and Colleges in the United States
Fernando Chivela  |  Senior; Health Care Administration; Luanda, Angola
Siphumelele Njapa  |  Sophomore; Applied Forensic Science and Criminal Justice; Durban, South Africa
Ksenia Petrova  |  Sophomore; Mass Communication with a concentration in Journalism; Priozersk, Russia
Hallie Smith  |  Freshman; History; Stedman, N.C.
Nomfanelo Hlophe  |  Junior; Biology with a concentration in Health Care; Nhlangano, Swaziland
Favour Adejor-Omale  |  Sophomore; Applied Forensic Science and Psychology; Lagos, Nigeria
**Advisor:** Brenda Mitchell, Applied Communication

In this presentation, we will address the presence and importance of International students to universities and colleges in the United States. By looking at the research, statistics, and personal experiences, we not only learn the benefits of, but the crucial need for diversity. Through/during our research, we have found that the enrollment of International students has decreased over the last three years. The implications of this have been affecting diversity on campuses. A solution for this problem is more investment into International programs, which can improve internationalization across our campus community. The benefits of having International students is so profound. Many U.S. students will never get the chance to go outside of the United States. Having interactions and relationships with International students can help strength tolerance and understanding of other cultures. Through our research, we show how campuses can create a more welcoming environment and how to promote inclusion/tolerance/diversity on campuses across the United States.
POSTER SESSION | 2:30-3:10 P.M. | BERNS STUDENT CENTER

Posters will be on display beginning at 9:00 a.m. in the Berns Student Center. Students will be available for questions during the afternoon poster session.

Allison Hall
Brendan Banks | Sophomore; Engineering with a concentration in Industrial & Systems Engineering; Raeford, N.C.
Scott Coleman | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Fayetteville, N.C.
Sirjan Kalakheti | Freshman; Mathematics and Engineering with a concentration in Industrial & Systems Engineering; Kathmandu, Nepal
Advisor: Dr. Denise H. Bauer, Engineering

A major issue on the Methodist University campus for residential students is the lack of user friendliness within the lobby. Our team of prospective engineers decided on two locations that appear to have the most severe decoration and seating concerns: Inside the main lobby (outside room 121 and outside the entrance leading to North Hall). From personal experience, and the opinions of some of the students and faculty, the hall (while meeting some basic social needs) lacks in decoration and adequate seating, which would make the lobbies feel more inviting. Our main focus will be on adding decorations and seating to the lobby areas such as tables or plants. We will also look at the immediate area outside of the building, surrounding both exits, and make advisements as warranted (in regards to aesthetics, maintenance, safety, etc.). We will gather ideas from the various students and faculty, then form an improvement plan based on the wants and needs of the students and faculty, cost of the ideas, allowed space, and how long would it take to implement these ideas.

Berns Lobby Area
Brian Dixon | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Cleveland, Ohio
Henry Murray | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Oklahoma City, Okla.
Maria Bossa | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Bogota, Colombia
Advisor: Dr. Denise H. Bauer, Engineering

A major issue on the Methodist University campus for residential students is the inability to simultaneously host an event and play ping pong in Berns. Another issue is the noise complaint due to excessive piano use. The final issue is a lack of remotes for the TVs. From personal experience and the opinions gathered from many students, these issues are causing Berns to be a less enjoyable location than it could. Our main focus will be improving the enjoyment and comfort levels in Berns to suit all students. We will also look at the present arrangement of furniture and other items to suggest possible changes. We will gather ideas from the various students who frequently use Berns and then form an improvement plan based on the wants and needs of the students, cost of the ideas, allowed space and how long would it take to implement these ideas.

Campus Bicycle Accessibility
Jacob Pressley | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Hendersonville, N.C.
Christopher Walden | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Charlotte, N.C.
Troy Chavis | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Charleston, S.C.
Jordan Younger | Freshman; Engineering with a concentration in Industrial & Systems Engineering; Virginia Beach, Va.
Advisor: Dr. Denise H. Bauer, Engineering

A major issue concerning bike usage at Methodist University is the accessibility for bikes. The lack of bike paths and the lack of bike storage spaces hinders the bike usage at Methodist University. Opinions from students from Methodist University state that they would be more willing to ride bikes if there was a designated path and more storage space. Our team will figure out the best areas for the bike paths and the bike storage area. Our team will accomplish that by surveying others to see where they would like new paths and bike storage areas. By doing this our team will create access for everyone at Methodist University to ride bikes to class and to get around campus.

An important issue on campus surrounds the Berns Student Center. Our group of engineers found that Berns seems a little outdated and overused in the wrong capacity. From personal experience and the opinions of some of the students, Berns lacks renovations and proper usage of space. In addition, Berns can seem cluttered and unorganized. Our main focus will be on organizing the layout of the floor and outdoor areas to appear more appealing to campus life. Furthermore, we will look into arrangements during events that would allow Berns to be utilized to its fullest potential on any given day. We will gather ideas from the various students and then form an improvement plan based on the wants and needs of the students, cost of the ideas, allowed space and how long would it take to implement these ideas.
The Eighth Annual Undergraduate Research and Creativity Symposium

Poster Session | 2:30-3:10 P.M. | Berns Student Center (Continued)

Rise Up
Terrence Duren | Freshman; Engineering with a concentration in Industrial Engineering; Chesnee, S.C.
Joshua Brunson | Freshman; Engineering with a concentration in Industrial Engineering Smithfield, N.C.
Markevius Harris | Freshman; Engineering with a concentration in Industrial Engineering; Calhoun, Ga.
Rashawn Green | Freshman; Engineering with a concentration in Industrial Engineering; Blythewood, S.C.
Advisor: Dr. Denise H. Bauer, Engineering

An issue has arisen dealing with the track and weight area of Nimocks Fitness Center. Many people have stated that it feels very compacted in this area and could cause serious injuries between the customers. We will attempt to design a new area for the track to be up higher to where these two areas won’t conflict with each other. Doing this will be helpful to competitive sports teams that use the facility and to students who enjoy running on the track. Doing this also will make this a safer for all customers so that whatever their fitness goals, there will be no distraction to cause them to mess up. The track being risen up to be placed around the basketball court will also help with events and other school-related things in Nimocks Fitness Center when dealing with capacity. We will consult with the staff of Nimocks Fitness Center, students, and faculty who all use these areas of the Nimocks Fitness Center. From there we will continue through the engineering design process to select the best alternative for the MU Community.

GenX: What Is It? Chemical Properties and Health Risks
Cason Verhine | Junior; Biology with a concentration in Integrative Biology; Grayson, Ga.
Advisor: Dr. Kurt Smith; Environmental Management

Despite GenX being in the headlines of many North Carolina newspapers over the last year, reportedly few people have a good understanding of this substance and its implications. This project attempts to fill what would seem to be a gap in accessible information about the deeper nature of GenX: its chemical components and properties, and the threats it poses to human health and the environment. GenX is a compound that has been created as an industrial by-product for decades. Recently, however, it has begun to be intentionally produced to replace another very controversial and dangerous compound – C8. Though the definitive impact on human health cannot yet be known, this project looks at research on similar compounds as well as animal studies to discuss the risk it poses as a possible carcinogen, mutagen, and reprotoxin. The impacts GenX will have on the environment are more clear. Studies from other parts of the world reveal that, as models predict, this particular compound meets many of the criteria of persistent, bioaccumulative, and toxic chemicals. It may be true that GenX poses less of a threat that its predecessor. However, there is still cause for reasonable concern - not the least of which is the unknown reach of its pollution and the endless other unknown chemicals it has come to represent.

Lower Extremity Electromyography while Walking in the AlterG at Different Bodyweight Support
Paul Craig | Senior; Physical Education and Exercise Science; Asheville, N.C.
Advisor: Dr. Amanda Ransom, Physical Education and Exercise Science

Obesity leads to a plethora of health risks and in addition, the excess adipose tissue in obese individuals negatively affects skeletal muscle by altering biomechanics and muscle activation patterns. This was an exploratory study used to determine if muscle activity and lower extremity joint kinematics could be examined simultaneously in the AlterG treadmill. Nine participants (three male; six female) (27.6 ± 5.2 kg/m2, 22.2 ± 2.22 years 1.72 ± 0.10 m, 78.7 ± 15.3 kg) participated. Surface Electromyography of the medial gastrocnemius, semitendinosus, vastus medialis, and vastus lateralis of the self-reported dominant leg was recorded using SENIAM guidelines. EMG data were recorded at 1000 Hz with DE-2.1 single differential EMG sensors and amplified by a Bagnoli 16-channel system (Delsys Inc, Boston, MA). Data were collected while walking in the AlterG treadmill at 100% and 50% body weight (BW) support. The mean muscle activation of the GA was significantly higher at the 100% BW support (9.75% MVIC) condition compared to the 50% BW support (7.67% MVIC) p=.04. Mean VL was 7.82% and 11.23% respectively whereas mean ST was (5.68% and 5.92%) and VM (10.65% and 10.82%) of the MVIC. Although, mean muscle activity is relatively unchanged between 100% and 50% BW support it may still be that the positive pressure from the AlterG is beneficial to help increase functional activities of daily living in an obese population. Further research is needed to understand the relationship between muscle activation and reduction in body weight support while walking in the AlterG.

Leading from the Constituency: The Student’s Voice
Erin Johnson | Senior, Digital Forensics & Cybersecurity; Phoenix, N.Y.
Kyle Johnson | Senior, Business Administration; Linden, N.C.
J. Wolbers | Junior, Political Science; El Paso, Texas
Bryson Pinkney | Junior, Computer Information Technology; Swansboro, N.C.
Advisor: Dr. Eugenia Johnson, Director of Academic Advising

We are going to do a community based survey of the students on campus asking them what two things they would like to see changed. We will also be asking them if they are commuters/residential, traditional/ non-traditional, what their class status is and what their major is. We will have people going around doing verbal surveys and also give students the ability to fill the survey out via Survey Monkey. Once we have the data we are then going to make some recommendations that the school could follow to increase student satisfaction. This is a group project that we decided on while doing the Habitudes Leadership Seminars.
ABSTRACTS

POSTER SESSION | 2:30-3:10 P.M. | BERNS STUDENT CENTER (CONTINUED)

Isaac Albéniz and the Classical Music World
Kaitlin Coltharp | Junior; Business Administration; Fayetteville, N.C.
Advisor: Dr. Javier Pabón, Modern Languages and Literature

This poster will address the influence of Spanish composer Isaac Albéniz on the diffusion of traditional Spanish themes in classical music. This work will discuss the biographical information of the composer, namely that of his own accomplishments which enabled him to influence the classical music world as such. In addition to the biography of his early accomplishments, this work will address the events and travel of his later life which was cause for Albéniz to write his magnum opus – Iberia, a 12-part composition written originally for the piano which is renowned for its technical difficulty and nostalgic homage to the landscape of Spain. Since its publication, Iberia has been transcribed for many other instruments and is lauded by many famous composers as a masterpiece of the time. The mass popularity of Iberia led to a global inclusion of Spanish themes in classical music – a trend which can be followed today in modern popular music. The information on this poster will prove useful as the audience will be able to see the influence of a single composer on the longevity and prolificity of Spanish themes such as rhythms and harmonies in music outside of its original culture, as well as analyze how classical music, a genre of music largely ignored by the general public, can influence the culture of a nation.

Detection of Blood Concealed by Paint
Lisa Kasamba | Senior; Applied Forensic Science & Justice Studies; Mbabane, Swaziland
Catia Dombaxe | Junior; Chemistry with a concentration in Forensic Science and Biochemistry; Luanda, Angola
Advisor: Mark Vecellio, Applied Forensic Science

Both physical (alternate light sources (ALS) and infrared light sources) and chemical compounds (most commonly Luminol and Bluestar) are employed to check a crime scene for latent blood stains. This purpose of this study is to investigate how effective Bluestar, ALS, and infrared light are in detecting blood under multiple layers of common household paints. Commonly sold drywall particle board will be painted using three of the most commonly sold household paints. Human blood will be projected (impact spatter) or transferred onto several painted drywall samples. The drywall samples will then be painted over with one, two, three, four, and five coats of paint. Each sample will be viewed with ALS using orange, yellow, and red filters and infrared light with IR filters. After recording the results with digital photography, Bluestar will be applied and observed. Positive chemiluminescence will be photographed.

This research will be beneficial for us and the forensic science/CSI community since case reports have shown that criminals often attempt to conceal bloodstains using a variety of means, including paint. Our study will add to existing literature involving the use of chemical and physical methods of detecting latent bloodstains under paint. Previous study has shown that all of the methods used in this study have been able to reveal bloodstains under several (up to eight) coats of paint, though the results have been inconsistent. Our study is unique because we will use the most commonly sold paints, which contain both paint and primer. Anecdotal observations suggest these “paint plus primer” formulations may detract from the ability to detect bloodstains under paint.

We aim to present our results in the Methodist University Research Symposium as well as the American Academy of Forensic Sciences annual conference in Anaheim, Calif. We will also seek publication in one of several forensic science journals.

Comparison of Gunshot Residue Visualization with Alternate Light Sources and Infrared
Sarah Morello | Sophomore; Applied Forensic Science; Fayetteville, N.C.
Alycia Smentkiewicz | Graduate; Applied Forensic Science; Raleigh, N.C.
Patrick Wright | Senior; Applied Forensic Science; Fayetteville, N.C.
Advisor: Dr. Amanda Ransom, Physical Education and Exercise Science

This poster will impact the forensic science community by promoting a better understanding of the capabilities of ALS and IR in visualizing GSR on dark colored surfaces. This poster will also help attendees understand the need for additional research of how paint may affect visualization of GSR. Forensic scientists and Forensic Pathologists analyze GSR patterns routinely in an effort to determine range of fire, which is often a critical factor in shooting investigations. The presence of GSR may also be used to determine if a person may have handled a firearm. The initial detection of GSR at a crime scene, even if presumptive in nature, may aid investigators in better understanding the shooting and can prove to be very valuable during a variety of investigative tasks, particularly interviews and evidence collection. GSR can be observed on many surfaces; however, dark colored surfaces often obscure it. This study examines two methods of presumptively detecting the presence of GSR on dark colored surfaces: ALS and IR. ALS has a longstanding history of forensic applications, both in laboratory settings and at crime scenes. An extensive list of latent evidence has been reported to be visualized with ALS, including fingerprints, biological evidence, and multiple types of trace evidence. IR is less commonly employed, but has been reported to help visualize inks and GSR.

Quantitative and Spectroscopic Analysis of the Components of Gunshot Residue (GSR) Deposited at Various Distances Using Different Caliber Firearms
Alexander Wilcox | Senior; Chemistry with a concentration in Forensic Science; Wilmington, N.C.
Advisor: Dr. Stephanie Hooper Marosek, Chemistry

Gunshot wounds and gunshot residue are two things that are commonly found at crime scenes. There is plenty of research on the appearance of gunshot wounds and GSR when a gun is fired at certain distances or from various calibers of weapon, but hardly any research on the amount of each chemical component found when guns are fired at various distances, or when various calibers of weapon are used. The purpose of this study was to determine the levels of each metal element in GSR (lead, barium, and antimony) found on clothing targets when various ranges and calibers of weapon were used. To do this, different calibers of weapon were each fired at clothing targets from a series of increasing or decreasing distances. The clothing samples were then dissolved in acid to extract the different metal components from them. The samples were then analyzed using Atomic Absorption Spectroscopy to determine the levels of each component found at the various levels and calibers. The resulting data was used to determine the existence of patterns found between certain calibers of gun and certain distances of firing.

The Eighth Annual Undergraduate Research and Creativity Symposium
Quantitative Determination of Hemoglobin in Bloodstains over Various Time Intervals Using UV/Vis Spectroscopy and Chemical Enhancements

Stephanie Knox | Senior; Chemistry; Spring Lake, N.C.
Advisor: Dr. Stephanie Hooper Marosek, Chemistry

The determination and quantification of hemoglobin in bloodstains is an important role in forensic chemistry. In this experiment, blood stains of known volume were administered to both white and dark colored t-shirts. After various time intervals, the preliminary blood tests Bluestar® and Lueco Crystal Violet were administered, and blood was extracted from the material. The concentration of hemoglobin was found by using UV/Vis Spectroscopy after designated time intervals and the hemoglobin concentrations were compared to determine if there was a correlation between concentration and the age of bloodstains. Bluestar® and LCV were used to compare the intensity of chromophore activity of each stain over the various time intervals to determine if a greater age diminishes the reactivity of the hemoglobin in blood.

Konigsberg Bridge Problem

Endashaw Tonja | Junior; Mathematics & Engineering; Addis Ababa, Ethiopia
Advisor: Dr. Kathleen Fick, Mathematics

Most mathematical theories came from simple problems; the Konigsberg Bridge Problem was one of the simplest problems. The Konigsberg bridge problem requires one to cross the seven bridges of the Pregre River. These seven bridges connect two banks of the river and two islands on the river. Carl Gottlieb, a mathematician who later became the mayor of the city, was passionate about these bridges. He questioned if one could cross all the bridges without crossing any of them more than once? He could not solve this problem, so he wrote a letter to Leonhard Euler about the problem. The answer Euler came up with opened a new field of mathematics which is known as geometry of position or graph theory. Euler stated that there was no path to cross the seven bridges without crossing them more than once, and this was the first proof of graph theory. All areas of mathematics focus on relations and patterns. Graph theory is used to study the relation between different objects, and it includes graphs, vertices, paths, circuits, edges, and nodes. The application of graph theory is very wide, for instance, it can be applied to networking, relations, and computer systems. Graph theory plays a huge role on how people approach mathematical problems because it helps humans to develop a mathematical model of the situation or problem.

Success and Satisfaction from College Athletics: Mindset Matters!

Taylor Jackson | Sophomore; Exercise Science; Bedford, Texas
Advisor: Dr. Jamie Robbins, Physical Education and Exercise Science

Coaches and athletes tend to see the world through different lenses, which generally leaves one or both parties dissatisfied. After analyzing data from a larger study assessing coaches’ needs and their ability to meet the needs of their athletes, interesting results were revealed about the athletes themselves. Nine athletes were interviewed to confirm or negate the remarks of their coaches, but further analysis revealed their own useful stories. Each interview was recorded, transcribed verbatim and then content analyzed. Results revealed the significance of being mature, realistic, rational, passionate, and selfless on both success and satisfaction of college athletes, regardless the behavior and approach of their coaches. Additional findings will be explained, and suggestions will be provided for current athletes who want to improve their own experiences.

Online Internship Experience at LRT Sports

Jonathan Fintak | Senior; Marketing and Business Administration; Sevierville, Tenn.
Advisor: Dr. Kim Scruton, Reeves School of Business

The company’s objective is to educate athletes on the college recruiting process through firsthand information and experiences. I will be sharing about my 12-week experience with four rotations (each being three weeks) in different areas of the company. The areas include Creative, Content, Statistics and Research, and Digital Marketing. I will be sharing some of the different projects and responsibilities that I did for the company as well as share some of the challenges that I faced along the way.

Carolina Panthers: Guest Relations Team

Jaime Logan | Business Administration and Sports Management; Emerald Isle, N.C.
Advisor: Dr. Kim Scruton, Reeves School of Business

This poster will show the life-changing experience I had while employed with the Carolina Panthers. I was working in Guest Relations, and my poster shows the trials and lessons learned from this opportunity. I am excited to share my involvement with you all.

Cincinnati Reds Group Sales Intern

Aly Thomas | Senior; Sports Management and Business Administration; Cincinnati, Ohio
Advisor: Dr. Denny Scruton, Sports Management

My poster will discuss the results of what I learned during my internship with the Cincinnati Reds professional baseball team and how it prepared me for a future career in sports. I outlined a company overview, an organizational chart, learning objectives, duties and responsibilities, results, and conclusions.

The Cincinnati Reds ticket department is a really big department to work in, so I was able to gain a lot of experience in different areas of sales including, group sales, premium sales, and single-game tickets. Through this I was able to develop advanced telemarketing and in-game sales skills. I learned to follow new approaches and improve my customer service experiences.

The poster outlines really relevant techniques and ideas that I learned while working in the front office of a Major League Baseball team. I had an amazing experience with the Reds and would appreciate the opportunity to educate others about working in professional sports.
ABSTRACTS (In order by session, room, and time)

POSTER SESSION | 2:30-3:10 P.M. | BERN'S STUDENT CENTER (CONTINUED)

Student Participation in Externships versus Internships
Aviance Marks | Senior; Business Management with a concentration in Resort, Club and Hospitality; Sanford, N.C.
Advisor: O.Z. Hamzah; Resort, Club and Hospitality Management

The purpose of my poster board is to show my research on student participation in externships versus internships. Most students do not understand the difference and often settle for less than a 100 percent meaningful experiential opportunity.

I have participated in both types of such experiential learning opportunities and each one taught me a different lesson to live by in my professional career. I will show the benefits of both externships and internships. I will also tell the audience how both experiences have made an amazing impact on my life and how that is continuing to shape me into the women that I want to be. I will depict how I have learned from both of these experiences in quantifiable ways.

In the end, my goal is to influence others to make the right decision and expose themselves to the vast opportunities employers offer through both externships and internships. No employer is going to come and find you, you have to go and make an effort. Students have to show that they have the passion and the drive, go to conferences and job fairs – and sign up to do as many internships/externships as possible.

Internship at Methodist University’s Office of Advancement
Elvin Espinoza | Junior; Accounting and Business Administration; Panama City, Panama
Advisor: Dr. Kim Scruton, Reeves School of Business

This poster presentation is about my internship experience in The Office of Advancement at Methodist University. I would like to speak about the different software and skills that I managed to learn by using Raiser's Edge program, a software that closely focuses in the collection of data from constituents within an organization and utilizes this information to track, retain, steward and increase the number of donors and their contribution for current and future projects. Furthermore, I would like to discuss how networking can be a fundamental tool to expand and grow in the professional business world. I participated in networking breakfasts and staff meetings at Methodist University and learned more about how a university operates from the financial point of view. Developing and understanding a set of rules such as punctuality and dressing code are important skills needed to succeed in the professional workplace. Equally important is the exposure to training sessions in order to acquire new skills or update and improve previously learned abilities related to the workplace. Finally, I would like to speak about the importance of philanthropy and its paramount role for the development and growth of educational institutions to provide scholarships and financial aid to students.

WHAT ARE YOU PROUD OF?

If you've written a research paper or created any kind of art work*—photograph, painting, musical performance, dance, etc.—why not see if you can get it published in the Monarch Review?

Submissions are welcome from October 1 to January 31.
(Graduating seniors can submit their work at any time.)

Go to methodist.edu/monarch-review to see previous volumes and the submission guidelines.

Questions?
Ask Managing Editor Baylor Hicks: sbhicks@methodist.edu or 910.630.7264 or drop by the Writing Center.

*…except that creative writing should be submitted to Tapestry.
THE EIGHTH ANNUAL CAPE FEAR NEW MUSIC FESTIVAL CONCERT

“Music and the Physical World”

Wednesday, April 10 | 7:30 p.m.
Matthews Ministry Center

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Special Presentations
April 10 | 12:30 - 1:30 p.m. | Reeves G2

• 12:30 p.m. | Dr. Stephanie Hooper Marosek
“The Elemental and Noteworthy Connections Between Chemistry and Music”

• 1:00 p.m. | Dr. Jie Zhou
“Numbers in Space and Time: From Ancient Greece to the 21st century”

METHODIST UNIVERSITY writing center presents

“Exploring Your Erroneous Zone: Why Fact-Checking Matters”

Thursday, April 11, 2019 | 6:30 p.m.
PA Medical Lecture Hall

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Arleen Fields
Archives Librarian

Kim Hasty
Director, University Relations

Dr. Mark Kline
Chair, Psychology Department

Dr. Kevin Swift
Chair, Mass Communications Department
AN UPDATE FROM THE CENTER FOR RESEARCH AND CREATIVITY
Dr. Clay Britton, Director

The 2018-2019 academic year has been an exciting one for the CRC. The students, faculty, and staff of the University have continued to embrace the mission of the Center, and have truly taken advantage of all of the opportunities the Center provides. A few highlights from this year include:

- This year’s Undergraduate Research Symposium represents the University’s largest group of students participating in oral and poster presentations. This year we have a total of 95 students sharing their projects!
- We expanded this year’s Symposium Week to include the Second Annual Nursing Research and Community Symposium. During this event, 27 senior nursing students will present their research projects, and the junior class will highlight their community projects.
- This year, students have been awarded over $5,000.00 to assist them in their travel to conferences and/or to purchase supplies and equipment for their projects. We hope to award even more grants as we near the end of the semester.
- Volume 5 of the Monarch Review: Methodist University’s Journal of Undergraduate Research and Creativity was released.

The development and implementation of all of these projects takes a great deal of hard work. I would like to take the time to thank each of the members of the CRC Advisory Board (alphabetical by last name):

- Prof. Daniel Bennett, School of Science and Human Development
- Dr. Lori Brookman, ex officio
- Dr. Del Crisp, ex officio
- Dr. Cameron Dodworth, School of Arts and Humanities
- Dr. Hugh Harling, Chair of the Internal Review Board
- Ms. Baylor Hicks, Managing Editor of the Monarch Review
- Dr. Trey Hoyt, School of Health Sciences
- Ms. Wendy Hustwit, Grant Writer and Sponsored Research Officer
- Dr. J-D Knodle, Reeves School of Business
- Dr. Jamie Robbins, School of Science and Human Development
- Dr. Eric See, School of Public Affairs
- Dr. Larry Wells, School of Arts and Humanities

On a more personal note, it has been an honor and a privilege to help develop and grow the CRC over the last eight years. I will be stepping down as the Director of the CRC at the conclusion of this year’s Symposium. It is my pleasure to announce that the Center will be in the capable and enthusiastic hands of Dr. Cameron Dodworth. Please join me in congratulating him in his new role and responsibility, as he and his team continue to advance the University’s initiatives in the realm of research and creativity.

I thank all of you, the Methodist University Community, for helping make the efforts of the Center for Research and Creativity a success.