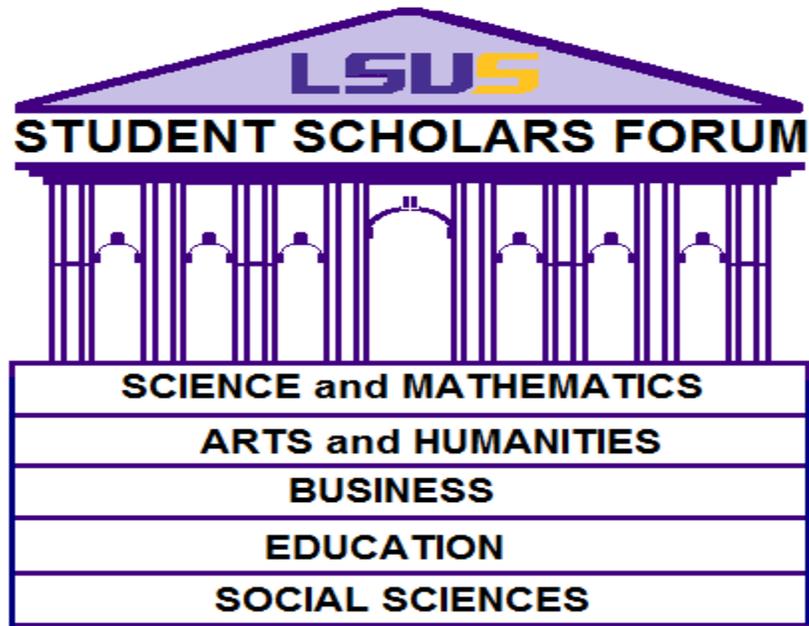


# LSUS

## Shreveport



# Student Scholars Forum

February 19, 2016

## ABSTRACTS

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## **Session A – Graduate Student Oral Presentations**

**A1 - Julie Taufa'asau** - The Other” in Leadership: Experiences of Multiracial Female Leaders in Independent Schools - LSU Shreveport - Dr. Iris Johnson – Educational Leadership -

*This qualitative study was developed to investigate female multiracial leaders in a historically White and male-dominated organization. Although there has been an increase in research in leadership studies including diversity aspects highlighting women and people of color, the multiracial female leader has largely been ignored. She finds herself as an “other” in three ways: (a) being female, (b) a person of color, and (c) multiracial. Her unique perspective can contribute greatly to the field of leadership studies and as such, the goal of this study is to understand and examine the experiences of multiracial female leaders in independent schools. In this study, three qualitative methods are used to give voice to these leaders and to examine their experiences: in-depth, semi-structured interviews; participant diaries; and the researcher’s field notebook.*

**A2 - Lindsay S. Ferrington** - Servant Leadership Education and the Implicit and Explicit Bias of Physician Assistant Students Toward Individuals of Low Socioeconomic Status - LSU Shreveport - Dr. Iris Johnson – Educational Leadership -

*Physician assistants (PAs) are an increasingly important part of the United States healthcare system, primarily due to a physician shortage and PA cost-effectiveness. Implicit and explicit biases, including toward the underserved, have been found to be barriers to effective healthcare delivery. Servant leadership training is proposed as a method to decrease these biases in 38 PA students at a single PA program. Three questionnaires (Servant Leadership Questionnaire, Physician Assistant Students’ Attitudes Toward the Underserved, and Implicit Association Test) will be administered at two different intervals during the first year of the PA curriculum. A demographic survey will be administered with the first round of questionnaires only. In addition to the traditional PA curriculum, each student will complete two different service projects in the local region, while also engaging in lectures, discussions, and written reflection exercises about bias and servant leadership. A multiple regression using control variables and initial questionnaire responses followed by a repeated measures ANCOVA will be utilized to determine if the servant leadership training is successful at decreasing PA student’s bias toward low socioeconomic individuals. If successful, this process could easily be implemented into other PA programs to improve healthcare delivery by producing less biased healthcare providers.*

**A3 - Jillian Marie Allbritton** - Anchee Min’s *Red Azalea*: The Search for a Heroine in Mao’s Genderless Society - University of Louisiana Monroe - Dr. Mary Adams – English -

*In Anchee Min’s memoir *Red Azalea*, she describes her experiences in Mao’s Communist China. Min is chosen by her family to go work as a “poor peasant” in the labor camp for youth reeducation. While on this farm, she and her peers are forced to do the back breaking manual labor that would normally be designated for men. In Mao’s vision, the concept of gender becomes blurred if not totally eradicated which creates a problematic homosocial environment for the children chosen to do youth reeducation which often leads to pansexuality and homoerotic relationships.*

**A4 - Anson Andrews** – Eagles and Authority: Classical Authority in Chaucer’s *House of Fame* - University of Louisiana Monroe –Dr. Will Rogers – Humanities-

*In Chaucer’s The House of Fame, Chaucer’s narrator makes a journey to the titular house of fame to discover how people become famous. In book two of the three part journey, the narrator meets a majestic golden feathered eagle who carries him on his way to the house. This eagle, while fulfilling the traditional roles of messenger and servant of Jove sent to assist the poem’s “hero” also acts as the vehicle for a metaphor about the role of language. Just as the Eagle carries the narrator toward the house of fame, Latin can carry the poet to the heights of fame. Latin is the language of upper classes and the church. It is the language of learning and evokes the authority of the classical world. If Chaucer wished to borrow the power of Rome in his writings, however, why does he write in English? Chaucer strikes a balance between English and the Latinate languages; the words in his works are English but the formal elements are derived from French and Italian sources. The interaction between the narrator and the Eagle clouds this interpretation in several ways. The Eagle is firm in his belief that he is superior to the narrator, but both he and the narrator question the Eagle’s strength to carry the heavy hero. I plan to explore Chaucer’s allegorical interplay between the Latinate Eagle and the English narrator, and hope to reveal Chaucer’s emphasis on the Latin roots and Latin future for his English language, over its Germanic past.*

**A5 – Janet Sherwin and Shadi Darzeidan** - An Ideal Amicitia: John Milton’s *Epitaphium Damonis* Illustrated – LSU Shreveport – Allen Garcie – BFA -

*In 1635, an aggrieved John Milton was moved by the death of Charles Diodati to write a Latin epitaph in honor of his late companion. As evident by details included in the poem, along with details found in epistolary correspondence, the two shared a friendship that far exceeded conventional contemporary expectations of friendship and possessed qualities much closer to a classical ideal. In his 45 B.C.E. *De Amicitia*, Cicero explains that: For it is love (amor), from which the word “friendship” (amicitia) is derived that leads to the establishing of goodwill...In friendship there is nothing false, nothing pretended; whatever there is genuine and comes of its own accord. (139). This is certainly true of the relationship shared between Milton and Diodati. The two shared intimate details of their lives, and Milton expresses within the lines of *Epitaphium* that he is utterly lost and unable to produce meaningful work without the presence, conversation, and collaboration of his closest friend. This collaborative project between English and fine arts will (through illustration and research) bring to life the relationship that Milton and Diodati shared and will demonstrate how a blending of like-minded individuals with varying talents can achieve what solitary work cannot.*

**A6 - Dylan Crowell** - Cause and Effects of Pearl Harbor - University of Louisiana Monroe – Dr. Ralph Brown, Dr. Jeffery Anderson – History -

*The attack on Pearl Harbor has often been discussed focusing on the unprovoked attack on the United States; while there is evidence to suggest the United States did indirectly cause Japan to attack. Very little research has gone into depth on theories and ideas surrounding the attack itself. One of these theories is the lapse in communication. In Hawaii, Army and Navy commanders failed to inform one another of their actions and messages they received. In Washington, there was confusion between leaders in Washington. More confusion lay between Hawaii and Washington, where there were conflicting messages and a lack of messages received. This leading to an idea that the attack was a military inconvenience, destroying or*

*damaging vessels and equipment that were obsolete and inflicting minimum casualties when compared to other engagements in World War II. While vessels and equipment that were instrumental in the war were not even in the harbor at the time of the attack. All of this provides a different take on the attack on Pearl Harbor.*

### **Session B – Undergraduate Student Oral Presentations**

#### **B1 - Emily Holmes – A Brush and a Pen – Hendrix College – Dr. Rod Miller – Art History -**

*This project compares the nineteenth century paintings of Caspar David Friedrich with Emily Brontë's nineteenth century masterpiece Wuthering Heights. I traveled to Paris last spring to study Friedrich's Tree of Crows (c 1882) in the Louvre and spent a semester this past fall at Oxford University studying literature and art history. At Oxford, I spent many hours studying the nineteenth century art collections at the Ashmolean and the Bodleian Libraries. I found that both the Tree of Crows and Wuthering Heights demonstrate the manner in which Friedrich and Brontë came to grips with personal tragedy during an era marked by the secularization of the church. Like the characters in Wuthering Heights, the figures in Friedrich's paintings are more focused on finding religion wherever they feel it most as opposed to finding it in a church. Both artists depict broken churches left in ruins. This project will contribute to the discussion of the unifying factors between nineteenth century art and literature.*

#### **B2 - Holly Mallinson - Comparing Environmental Conditions of Convective Storms Producing Damaging Winds and Hail - University of Louisiana Monroe - Dr. Todd Murphy – Atmospheric Science -**

*Damaging winds spawning from severe thunderstorms account for over half of all damage reports in the United States and can produce more damage than tornadoes. Hail is also a significant factor to consider in the damage potential of these storms. However, it is not well understood why some storms that produce damaging winds also produce large amounts of hail while others do not. Therefore, this study examines the environmental conditions of convective storms to determine why only some storms produce damaging wind and hail while others may only produce damage wind. To isolate the primarily damaging wind environment from tornadic environment, storm reports from 2000-2015 were filtered on days where damaging wind was the majority of reports. Days where hail reports were  $\leq 10\%$  of total reports were separated from cases where hail accounted for  $> 10\%$  of reports. Environmental parameters examined include instability, mid-level moisture, bulk and low-level wind shear, and rotating updraft potential (helicity).*

#### **B3 – Elisa Murillo - Classification and Analysis of Tornado Outbreaks in Dixie Alley and Tornado Alley - University of Louisiana Monroe - Dr. Todd Murphy – Atmospheric Science**

*Numerous studies have been done on the popular area attributed with tornado frequency known as Tornado Alley. However, the number of studies done on the secondary tornado frequency maximum, Dixie Alley are not as numerous, and studies on outbreaks in this area are even less common. This study aims to analyze the tornado outbreaks in Tornado Alley and Dixie Alley to*

determine which area has more severe outbreaks during the years 2000 through 2014. Since these areas, as well as the term outbreak, are relative to perception, this paper will define these terms to set limits on the data analyzed. Parameters such as number of occurrences, path length and width, dollar loss, injuries and fatalities will all be taken into consideration during this study. Statistics will be presented on the outbreaks and individual tornadoes within them. Critical findings show that Dixie Alley received more severe tornado outbreaks than Tornado Alley, and that this area is at a much higher threat for severe tornado outbreaks.

**B4 – Anthony Blankenship and Farhad Efatian - Use of *In-silico* Analysis in Target Profiling of Fusarochromanone in Oncogenic MAPK and JNK Pathways - LSU Shreveport - Drs. Elahe Mahdavian and Brian Salvatore – Chemistry -**

*Fusarochromanone (FC101) is a small organic molecule and a fungal metabolite with anti-angiogenic, anti-cancer, and apoptotic-inducing properties; however, the biological mechanism of action and potential therapeutic target(s) has yet to be elucidated. In this study, we utilized the in-silico target fishing techniques using Sybyl-X to examine the most likely protein target(s) of FC101. Numerous proteins were probed and objectively ranked for their binding affinity/selectivity using a validated ranking method, which includes multiple consensus-scoring function, and negative controls. RAC-alpha serine/threonine-protein kinase (Akt1), RAC-beta serine/threonine-protein kinase (Akt2), and Mitogen-Activated Protein Kinase Phosphatase (MPK-7) were identified as proteins with highest binding affinity to FC101.*

**B5 - Holly Rieken and Quintin Richardson - Evaluation of Anti-Cancer Activities of Caffeic Acids and Analogs - LSU Shreveport - Drs. Elahe Mahdavian and Brian Salvatore – Chemistry -**  
*Natural plant compounds or phytochemicals have longed been used as a platform for developing synthetic derivatives for treatment of broad disorders ranging from cancer to heart disease. Examples of such phytochemicals turned treatments are Tamoxifen and Warfarin. Caffeic Acid, a known hydroxycinnamic acid, is found in Coffea Arabica and is believed to possess strong anti-oxidant activity especially in vitro and may help in either preventing heart disease or actual treatment. These naturally occurring anti-oxidants have recently become quite popular in today's healthy lifestyles and are being touted as miracle compounds. Large scale in depth studies need to be exercised in order to understand their mechanism of action as well as how they interact within the body. Our project is designed around known polyphenols, Rosmarinic Acid, Caffeic Acid, Caffeic Acid Phenethyl Ester (CAPE), and Chlorogenic Acid, and their biological activity in relation to cancer. Using common cancer cell lines such as cervical cancer HeLa cells and two pancreatic cancer cell lines, MiaPaca and Panc-1, we have tested the ability of these compounds to inhibit cancer cell proliferation and migration. We will further delineate the relationship between the phytochemicals and their potential as therapeutics possibly allowing for new and safe treatment modalities that span multiple cancer types.*

**B6 - Ryan Grant and Peyton Rachal Joshua Lutz, and Steven Adelmund - Fusarochromanone as a Lead for Novel Cancer Drugs - LSU Shreveport - Drs. Elahe Mahdavian and Brian Salvatore – Chemistry (Undergraduate) -**

*The primary goal of this research is to develop novel therapeutics based on fusarochromanone (FC101), a natural mycotoxin with potent direct anti cancer activity. This research may lead to new cancer drugs that are cancer-specific, more potent, and less toxic than conventional non-specific cytotoxic chemotherapy. Like most other bioactive natural compounds, the potency of*

*FC101 is compromised in-vivo, suggesting sub-optimal bioavailability. Development of FC101 as a drug requires the completion of its total synthesis, as well as the synthesis of a series of structural analogs with greater in-vivo potency than the parent compound. Progress towards the completion of total chemical synthesis of FC101 will be presented. We have employed a new pathway for synthesizing the unique multifunctional four-carbon side chain in the parent compound. We have also been successful in synthesizing the 6-iodo-4-chromanone, a key intermediate that is needed for the coupling reaction through Sonogashira methodology. Additionally, we have synthesized several novel analogs of FC101 and will present the rationale for choosing these structural analogs for devising structure activity relationships for this series of compounds.*

### **Session C - Graduate Student Oral Presentations**

**C1 - Amy Hagan** - Sequential Exposure to Victims and Empathy Burnout - The University of Texas at Tyler - Dr. Eric Stocks – Psychology -

*Empathic concern refers to the feelings that arise when an individual witness' another individual's current state. Over time, the exposure to situations of stress can build towards emotional exhaustion and depersonalization. The present research in empathy burnout literature focuses on the sudden onset of empathy burnout among average populations. Three studies were conducted under the hypothesis that empathy burn out would be evident through the decline of empathy and the incline of distress for scenarios presented. Empathic scenarios used were developed by creating a base rate of empathy for each scenario. Empathy and distress responses were recorded following each scenario. Two randomized orders of Study 3 were presented to prove presented order of scenarios did not influence empathy burnout. Results indicated a significant decline in empathy, regardless of vignette order or presentation of repeated or sequential questioning. Over time, repeated exposure to victims reduced empathic responses. Present research provides evidence for the development of empathy burnout through sequential presentation of victims among an average college population. Future research can expand upon expected empathic concern and the degree of empathic concern following sequential presentation to further investigate the development of burnout.*

**C2 - Hien T Nguyen** - Major Sources of China's Robust Economic Growth - McNeese State University – Matior Rahman – Business –

*This paper investigates the major sources of China's miraculous economic growth since 1978. The answer is supported by the comparison between pre-1978 and post-1978 and the Regression Analysis of economic data of China from 1978 to 2013. A huge jump from a poor agriculture based economy to the second biggest economy in the world with a share of 12.67% of global GDP in 2013 in only 3 decades could be credited to two main reasons: large accumulation of capital, and significant improvements in productivity resulted from the 1978 economic reform.*

**C3 - Mohammad Ali** – Mediated texts in the film Lagaan: A Marxist analysis on perpetuation of hegemonic power structure in the Indian Subcontinent – The University of Texas at Tyler – Dr. Marsha Little Matthews – Communication -

*The British ruled the Indian subcontinent for about two centuries, and established a hegemonic power structure. Sixty-eight years after independence, its people are still talking about changing their "colonial" mindsets, raising the question, "What is the role of popular culture texts in the*

*perpetuation of hegemonic power structure in this region?” Literature suggests that despite the British handing over power to Indian people, the British still seek to influence and control the region. As such, this study examined the mediated texts in the film Lagaan, which portrayed direct communication between British colonial power and colonized people, aiming to identify its occluded messages reflecting perpetuation of the British hegemonic power structure in India. Using the Marxist perspective lens, the study found that the central British power was portrayed as pro-justice, and helpful, contributing to the perpetuation of the hegemonic influence. Indian people also participated in their oppression, further strengthening the hegemony. The findings suggest Indian people to be critically aware of consumption of pop culture. For future study, this evaluation raised a question about intention of the role of Indian media in shaping the pop culture production, and thus maximizing their profits no matter the messages the common people receive.*

**C4 - Candace Prejean - Is China Gaining Economically at US Expense? - McNeese State University – Matiur Rahman – Business -**

*This paper investigates the relationship between the US and China to determine if China is gaining economically at the expense of the US. This relationship is determined by using regression analysis of four different economic factors including real GDP growth of US and China, US export growth to China and US import growth from China, US and China's unemployment rate, and US and China's inflation rate. The data covers a 29-year period spanning from 1986 through 2014. Expectedly, unemployment rate of China is negatively correlated with the unemployment rate of the US. Unexpectedly, GDP, imports/exports, and the inflation rate of China is positively related to that of the US. The results of the regression help determine that China is not gaining economically at the expense of the US. None of the independent variables explained more than 10% of the changes in growth or decline of the four variables evaluated for the US. Also, all four variables were statistically insignificant in terms of their t-values.*

**C5 - Rebekah A. Barnes – Caddy Compson: The Fall of the Old South: University of Louisiana Monroe - Dr. Janet Haedicke – English -**

*William Faulkner's *The Sound and the Fury* revolves around the defilement and loss of Candace Compson, the only daughter of the Compson family. As evidenced from the narratives of Caddy's three brothers, Benjy, Quentin, and Jason, each of the brother's individual constructions of Caddy are also constructions of their own masculine identities as southern gentlemen. Through their attempts at controlling the narrative and ultimately Caddy, each brother strives simultaneously and futilely to resurrect the constructs of the once regal Old South and to restore order to the post-civil war south. Caddy's rebellious sexuality emerges as the driving force of the novel until the black servant Dilsey claims the final narrative. The loss of a putative Eden parallels the loss of Caddy's innocence as well as the Compson land and status. The ruination of the family's southern belle threatens each brother's masculine identity and signals the emasculation of the southern gentlemen. Their loss of the romanticized "Lost Cause" prophesies the possibility through Caddy and Dilsey of a truly new New South.*

**C6 - Garrison Turner** - Kiersey Temperaments in the Classroom Setting - University of Louisiana-Lafayette - Dr. Susanna Garcia, Dr. Roche-Wallace – Music -

*The Keirsey Temperament Sorter (KTS) is a self-assessed personality questionnaire that helps a person better understand themselves or others. There are four outcomes from the personality test: Guardian, Artisan, Idealist, and Rational. The concept was first introduced in the book, Please Understand Me, written by David Keirsey. The KTS is the most widely used personality assessment; incorporated by major organizations such as Bank of America, The U.S. Air Force, IBM, etc. Though this assessment is used in large corporations to help promote productivity, there is little research on how it affects a classroom's learning environment. In this research study, I will determine whether catering to students' personality results will improve grades, class participation, comfort levels, and more.*

**Session D - Graduate Student Oral**

**D1 - Leshawn Alexander** - Creation and Implementation of an Evidence Based Lactation Policy at the University of Louisiana at Lafayette - University of Louisiana at Lafayette - Helen M Hurst - College of Nursing and Allied Health Professions -

*Multiple national authorities recommend breastfeeding at least through the first year of life because breastmilk is a living biochemical fluid containing components that provide the most appropriate form of infant nutrition and immunity protection. Moreover, multiple Louisiana state laws and the Patient Protection and Affordable Care Act § 4207 support breastfeeding. Research shows maternal and infant benefits related to breastfeeding. Infants who receive breastmilk experience fewer occurrences of infectious diseases, non-infectious diseases, and malnutrition. Mothers who express breastmilk experience less postpartum depression, diabetes, osteoporosis, and cancer. Even though the rationale to provide all lactating mothers a supportive environment to express their breastmilk is evident, the workplace and academic settings can present a barrier to continued breastfeeding for lactating mothers. The lack of lactation policies, a designated lactation area, and of organizational support are three major barriers that decrease a mother's ability to continue providing breastmilk to her infant upon returning to work or school. The purpose of this project was to implement Lactation Support Services to remove common workplace and scholastic barriers by providing a Lactation Policy, designated Lactation Rooms, and a campus environment that is "Breastfeeding-Friendly" at the University of Louisiana at Lafayette.*

**D2 - Aisha Ali-Gombe** and Chirta C. Saini - PE-Droid: Flexible Privacy Policy -Enforcement System – University of New Orleans – Infan Ahmed, Golden Richard, and Vassil Rossev – Computer Science -

*The Android Security system protects data and resources using the Permission model. Access is granted by exclusive consent of the device user at installation time. However, the two biggest design flaws of such model are: 1) All-or-none criteria – user only has two choices: either to accept all and install or reject and not install. 2) Inflexibility to restrict after the initial approval. While a number of operating system centric solutions have been developed over the years to improve the flexibility of this model, Android and by extension device manufacturers are all reluctant to implement it. As such, we developed a User-centric, app-level solution, called **PE-Droid** that can be employed by users to securely install and execute their apps. Via instrumentation, our system inserts fine grain privacy controls on a chosen*

*application -- ranging from SMS, Calls, Location information and Network. The easy to use interface of PE-Droid helps users find apps on Android market, sends the chosen app-name to the cloud server for download and instrumentation. On receipt of the instrumented app, it installs and enforces the chosen policies on the target app. It also provides a policy control interface for which the user can update policy at any time.*

**D3 - Hari Bohara** - Effect of Nitrogen Stabilizers and Biochar on Greenhouse Gas Emissions and Ammonia Volatilization from Poultry Litter Amended Soils – LSU Shreveport and LSU Agricultural Center Red River Research Station – Dr. Syam Dodla – Biology -

*Agriculture is considered to be one of the major sources of environmental pollution. Major pollutants from agriculture include nutrients, greenhouse gases (GHG), and ammonia (NH<sub>3</sub>). Amount of pollution from agriculture varies significantly with management practices, including the soil amendment of poultry litter (PL), a good source of multiple nutrients. Nitrogen (N) in PL is highly prone to losses through surface run-off, NH<sub>3</sub> volatilization (an air pollutant), nitrous oxide (N<sub>2</sub>O) emissions (a GHG with high global warming potential) and leaching which decreases its nitrogen use efficiency (NUE) while polluting surface and ground water, and the atmosphere. Hence, development of strategies to minimize N losses from PL amended soils are important to improve farm profitability and minimize environmental pollution. In the present study, the efficiency of applying N stabilizing compound (Agrotain<sup>®</sup> Plus) that has N-(n-butyl) thiophosphoric triamide (NBPT) and dicyandiamide (DCD), and biochar (BC) produced from pinewood on minimizing the N losses and GHG emissions from a PL amended cotton field. Both NBPT (urease inhibitor) and DCD (nitrification inhibitor) are reported to be effective in reducing N losses from inorganic N fertilizers, while no information is available about their use with animal wastes. On the other hand, various researchers have reported the beneficial effect of BC application to minimize the nutrient loss and GHG emissions from agricultural soils. A two-year field study was conducted in a very fine sandy loam soil that received PL at 3.5 Mg/ ha rate except for control plots. Treatments of the study included three rates of Agrotain<sup>®</sup> Plus (AgP) (0, 3 and 6 kg/ha), three rates of BC (0, 2 and 4 Mg/ha) along with a control treatment and a treatment that received 4 Mg/ha of BC with no PL. Beginning from the application of treatments until the harvesting of cotton crop, GHG emissions (CO<sub>2</sub> and N<sub>2</sub>O) and NH<sub>3</sub> volatilization losses were monitored. Results from a total of 32 sampling events showed that application of AgP and BC decreased NH<sub>3</sub> volatilization losses by 6 to 13 % from PL amended soil. On the other hand, application of AgP and BC had showed contrasting results on GHG emissions in each year. While the first year of the study showed decreased CO<sub>2</sub> and N<sub>2</sub>O emissions, the second year showed increased CO<sub>2</sub> and N<sub>2</sub>O emissions. Both years, AgP application to PL amended soils increased N uptake and cotton yield through improving available N throughout the crop season.*

**D4 – David McFarland** - Comparing the effectiveness of biochar and hydrochar in reducing nutrients leaching from tomato cultivation - LSU Shreveport and LSU Agricultural Center Red River Research Station – Dr. Jeong – Biology -

*Biochar, produced through incomplete burning in partial or total absence of oxygen, enhances nutrient retention due to its high cation exchange capacity (CEC) and high surface area. The application of biochar to the soil has been shown to increase productivity, crop yield, soil microbial biomass, and reduction in nutrient leaching. Hydrochar is being increasingly discussed as an alternative or an addition to improve chemical and physical properties for plant growth. We studied the effects of adding biochar and hydrochar to plant soil on the retention of*

reactive phosphorus (P), total phosphorus (TP), and total Kjeldahl nitrogen (TKN). The level of these nutrients were measured in the leachate taken from tomato plants at four intervals over six weeks where hydrochar and biochar had been added to the soil in concentrations of 2.5%, 5%, and a combination of 2.5% each. We found a reduction on the levels of phosphorus (P), total phosphorus (TP), and total Kjeldahl nitrogen (TKN). We have found that hydrochar is on average more effective at reducing nutrient leaching from tomato cultivation when used in place of biochar and even more effective when used in combination with biochar.

**D5 – Brynnor Bonnett and Erica Smith** - Evaluation of Anti-Cancer Activities of Fusarochromanone and Analogs - LSU Shreveport - Drs. Elahe Mahdavian, Brian Salvatore, and Alena Smith – Chemistry -

*Fusarochromanone (FC101) is a small molecule fungal metabolite that has demonstrated potent anti-cancer activity, the ability to impact multiple cancer cell phenotypic behaviors, and significant in-vitro growth inhibitory effects. However, these effects have not been fully reproduced in-vivo, indicating that the development of an optimized analog is necessary to capitalize on the drug development potential of this molecule. Towards this end, we have tested the Structure Activity Relationships (SAR) of series of first generation analogs on two pancreatic cancer cell lines (MiaPaca and Panc1), and one cervical cancer cell line (HeLa). The SAR analysis of FC101 (C<sub>15</sub>H<sub>20</sub>N<sub>2</sub>O<sub>4</sub>), and structural analogs including: FC101g (C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>O<sub>4</sub>), and FC101e (C<sub>17</sub>H<sub>24</sub>N<sub>2</sub>O<sub>4</sub>) will be presented. The observed relationships will provide evidence to guide the synthesis of more optimized second generation analogs with improved in-vivo bioavailability and anti cancer effect. We believe this project is important in discovery of treatment modality that spans across the cancer biology field.*

## **Session E – Graduate and Undergraduate Student Oral Presentations**

**E1 - Holly Mallinson** and Fiaz Ahmed - Vertical Motions in Convective Clouds Over Darwin, Australia - University of Louisiana Monroe – Courtney Schumacher – Atmospheric Science (Undergraduate) -

*Vertical motions are essential in parameterizing convection in large-scale models. Yet in tropical systems vertical motions are difficult to obtain, especially in areas of active convection. This study uses three months of profiler data from Darwin, Australia to directly compare vertical velocity and spectrum width with reflectivity at a height of 1 km (a near-surface rain proxy) for shallow, mid-level, and deep convective clouds. Vertical velocities for all convective clouds were also compared to echo-top heights of varying reflectivities to better understand convective cloud dynamics in relation to their vertical structure. In all convective clouds three distinct regimes appear indicating the different stages in the convective cloud life-cycle. Variance seen in the maximum up-and downdraft height may allow for better characterization of cold pool properties. Throughout all convective cloud types, spectrum width has the highest values at lower heights than where the strongest up-and downdrafts occur while also showing a maximum value core around the transition height. In addition, maximum vertical motions occur at or just beneath the 30-dBz echo-top height in all convective clouds, notably in the mixed phase region, suggesting possible links to electrification.*

**E2 - LaTienda P. Davis** - Dynamics of Generational Leadership in Law Enforcement – LSU Shreveport – Education (Graduate) -

*The purpose of this study is to examine the differences in leadership styles of Generation Y (1980-1996) law enforcement personnel in comparison to their Generation X (1965-1979) counterparts. Research on inter-generational work relations reveals that many professions are experiencing a culture clash between Generation Y employees and previous generational cohorts. Law enforcement is among the many career fields that have reported a decline in qualified leaders due to retirement of Baby Boomers (1945-1964). Generation X members are not available in sufficient quantities to fill leadership positions, and inexperienced Generation Y members with seem to have little desire to pursue leadership opportunities. The 10-year occupational forecast of the U.S. Bureau of Labor (2012) predicted that the law enforcement occupation will experience an estimated 5% increase in newly hired personnel by 2022; below the national average. In order to fill the void in leadership left by Baby Boomers, two generations (Generations X and Y) of law enforcement personnel will need to emerge towards leadership at the same time. This study will attempt to identify some of the differences in leadership styles between these generations of law enforcement personnel and examine how those differences will define leadership in law enforcement in the new millennium.*

**E3 – Alena Smith\*** - Using High Through-Put Screening Methods to Investigate the Anti-Cancer Activities of Synthetic Flavonoids and Polyphenols – LSU Shreveport - Drs. Elahe Mahdavian and Brian Salvatore – Chemistry \* Research Associate - Not Eligible for competition

*Within today's popular culture we see a large booming market for antioxidant use. However, very little is known about their activity, their bioavailability, and the relationship between their activity and their structure. Common flavonoids and polyphenols such as Caffeic Acid analogs and Fusarochromanone (FC101), have now been fully synthesized at LSUS and previous tentative studies have yielded interesting results. We do know that FC101 at least posses potent anti-cancer activity against multiple cancer cell lines. Using high through-put screening mechanisms such as the IncucyteZOOM®, we will be able to delineate which polyphenols and/or flavonoids have the highest activity and which analog and/or parent compound intrinsically contains the best biological availability and stability. All high throughput screening assays will be replicated and thoroughly tested using common cancer biology assays such as Crystal Violet Proliferation Assay and the Wound Healing Assay. Current results hint at FC101 as possessing the strongest anti-proliferative activity out of the compounds studied; however, further work and testing in order to understand how this activity relates to its structure. We believe these flavonoids and polyphenols represent an untapped therapeutic drug potential.*

**Session F - Undergraduate Student Oral Presentations**

**F1 - Amoi Lyons** - The Scales - University of Louisiana at Monroe - Meredith McKinnie-English -

*While studying Ralph Ellison's Invisible Man in her creative writing class, a young black student takes notice of how the class discussion veers away from the blatant racial themes and undertones within the book. She takes it upon herself to have a one-on-one conversation with her instructor Mr. Lee, a white male, to hear his opinion on both the contents of the book and his views on racial relations in today's society. During their discussion she questions whether*

*or not he faces the same daily strongholds a black person would. She concludes that despite how opposite her mentality is from Mr. Lee's, they are both similar, and that the concept of race is meaningless.*

**F2 - Rachael Maddox** - Seeing the Forest for the Trees: Unraveling the Roles of Shakespeare's Forest - University of Louisiana at Monroe - Dr. Julia Guernsey-Pitchford – English -

*In the works of Shakespeare, the location of the action plays a crucial part in the understanding that viewers and readers of his plays create for themselves. As a location, the forest is particularly sensitive to multiple interpretations and roles within the play, especially in two iconic comedies, *Midsummer Night's Dream* and *As You Like It*. The forest is a meaningful location not only because it is where the action takes place, but also because in some instances the forest actually initiates or perpetuates the action. *Midsummer Night's Dream* and *As You Like It* demonstrate how the forest functions as a setting, but also as a protagonist. Although the forest has no spoken lines, it leads the characters to where they need to be when they act upon it and functions to progress the story in both plays. Shakespeare's forest is simultaneously symbol, setting, and character.*

**F3 - Jerry Ehlers** - Obesity and Climate Change: The Deadly Link - University of Louisiana at Monroe – Dr. Giles – English -

*In my research paper I discuss the relationship that exists between obesity and climate change. Through extensive research, I drew the conclusion that the environment continues to be severely impaired by the byproducts of a more obese society, including large amounts of methane produced by livestock, the waste produced by manufacturing and distributing processed foods, and more fossil fuel consumption for transportation and recreational activities. The negative impacts of all of these activities continue to be ignored while the environment continues to become affected and people's health deteriorates. Since change is necessary and needs to occur soon, American citizens and the U.S. government need to work together to reduce the factors that contribute to the obesity epidemic that we are currently facing by implementing various programs and mandates to ensure a reduced impact on the environment. Furthermore, people must practice similar behavior and learn how to reduce their negative impact on the world.*

**F4 – Susan Newcomb Mowrer** - Burying Fletcher - The University of Texas at Tyler - Dr. Karen Sloan and Dr. Anne Beebe – English -

*“Burying Fletcher” is the complex story of my relationship with my father. He is a man whose story needs to be told, the story of a man of The Greatest Generation. I've been told by many that this is a story of a life that is vanishing – the life of mid-century America that will never be seen again. As much as I hate to say that this may be true, I believe it is a life that should be remembered and even emulated. In the end, it's about honor, obligation and love.*

**F5 – Avery Champ, Cassandra Collins, Leonard Ealy, Jada Henderson, and Tanesha**

**Johnson** - Perceptions of Studying Abroad Through the Lens of HBCU Students: the Preparation, Motivation, and Hesitation - Jackson State University - Dr. Tracey Bell-Jernigan - Elementary and Early Childhood Education -

*The decision to travel and study abroad can be particularly meaningful during the years of undergraduate and graduate studies. During these years, students can embrace the benefits of traveling to various countries while immersing themselves in the culture and expanding their intellectual and academic capacities. In addition, students become more aware of themselves as individuals all while contributing to their personal and professional advancement. Although the study abroad experience can be exhilarating, there are some apprehensions that students often face. The purpose of this study is to examine potential apprehensions of not taking advantage of study abroad experiences and to explore the basic readiness and motivational levels of students' preparedness to study abroad. This study will provide a perspective of HBCU students' perceptions, motivation, apprehensions, and readiness for study abroad experiences. The data will be utilized to potentially create motivational strategies that will encourage HBCU students to participate in more study abroad experiences.*

**Session G - Undergraduate Student Oral Presentations**

**G1 – David Brasher** - A Theatre of Manliness?: How Ronny Heaslop's Masculinity in E.M. Forster's A Passage to India Symbolizes British Colonialism - University of Louisiana Monroe – Dr. Jana Giles – Humanities -

*My paper will examine the character of Ronny Heaslop in E.M. Forster's novel A Passage to India and illustrate how his overt masculinity is symbolic of British colonialism in India. By examining how Victorian schools defined and articulated the ideas of Englishness and English manliness, I will illustrate what motivates Forster's character; further, I will show how Ronny's relationship with his mother and fiancé demonstrates the difference between their genders which is also symbolic of the masculine West and feminized East. Lastly, I will show how Ronny's idea that it is his duty is to dispense justice in colonial India causes him to become representative of British control and how both his and Britain's power begins to crumble by the end of the novel. Through the character of Ronny, Forster illustrates the gender ideal of Western civilization by transporting it to colonial India, demonstrating a comparison between masculinity and imperialism.*

**G2 – Kyle Townsley, Olivia Babineaux, Hannah Walles, Kelli Fontenot,** and Demi O'Neal - McNeese MBA Promotion Plan - McNeese State University – Dr. Jeffery Totten – Business

*The primary objective of this campaign is to increase awareness of, and enrollment in, the McNeese State University Masters of Business Administration Program. The MBA program provides a means by which students, in the growing job market of southwest Louisiana, can pursue a higher level of business education. The target market for the MBA program is mostly young people with a business education who wish to further their education. The market is segmented into two sectors: resident students and international students. The MBA program is currently offered only in face to face format. In fall of 2016, it is likely that a completely online program will be implemented in addition to the traditional program. In order to reach this target market, student centered marketing must be conducted. As the MBA program is lacking in funds, all marketing must be done in cost-effective manner. Low-cost marketing programs such*

*as flyers, newspaper ads, personal selling by professors, and building hype through public relations may be utilized to promote the MBA program. It is the goal of our plan to use these methods to reach the target market and southwest Louisiana community to increase awareness of, and enrollment in, the McNeese MBA program.*

**G3 – Tabetha Garrison - Integrated Marketing and Consumer Behavior Today - McNeese State University – Dr. Jeffery Stevens – Business -**

*Research is underway related to consumer buying patterns to provide businesses insight to target their marketing efforts. This research focuses on consumer behavior as a continuously changing variable in marketing efforts. Evidence shows that integrated marketing has become a useful tool in influencing consumer behavior. Identifying key factors affecting buying behavior is imperative in swaying buyers in purchasing business products, which the focus of this research project. Research shows that creating new needs for the consumer influences behavior, like hypnotic suggestion and subliminal advertising persuasions. Models of integrated marketing communication build and strengthen relationships with various consumer populations. Communication flow between a business and consumers are necessary to gain a competitive advantage. Consumers must be persuaded and manipulated to stay loyal to a brand. Product placement, merchandising, advertising, product labeling and packaging are all elements to influence subconscious purchasing behavior in consumers. When a business has gained customer loyalty, they create new subconscious needs for consumers. Some businesses are unaware of what their target market needs and these are the businesses of the future that must be aware of these new needs. A critical aspect of this research relates to businesses creating the new needs and subliminally persuading their buyers.*

**Poster Session – Undergraduate Poster Presentations**

**P1 - C. Miguel Taylor - Comparison of Insectivory by Birds in Urban and Rural Habitat - University of Arkansas at Monticello (CMT, JLH), Wilkes University (JAS) - John L. Hunt; Jeffrey A. Stratford – Biology -**

*It has been demonstrated that abundance and species diversity of native birds is lower in urban areas than in rural areas. However, it is unknown how lower abundance and species diversity affect ecosystem services normally provided by these birds. For example, few studies have investigated the effects of urbanization on insectivory (the eating of insects by birds). As part of a larger study, we compared rates of insectivory in urban, rural, and intermediate settings in southeastern Arkansas by using clay models of caterpillars. Transects were constructed consisting of 25 clay models randomly placed among foliage along 50-meter lines. Two transects each were deployed in urban, rural, and intermediate settings. Clay models were left in place for one week, and were then checked for signs of attempted predation. Our results will be combined with those from several other study sites in the eastern United States for statistical analysis. However, in our local area, we seemed to find no significant differences between the habitat types*

**P2 - Elisa Murillo** - The Sensitivity of Supercell Simulations to Initial Condition Resolution: Implications for Warn-on-Forecast - University of Oklahoma/NSSL - University of Louisiana Monroe - Corey Potvin – Meteorology/Atmospheric Science -

*The motivation for this study is based on the NOAA Warn-on-Forecast (WoF) program, which is developing a convention-allowing ensemble system for operational use. The program envisions a paradigm shift from prediction of severe convective storms based primarily on current observations, to storm-scale data assimilation and prediction systems playing a larger role in the severe weather warning process. This study focuses on testing the sensitivity of these supercell simulations to the initial condition resolution, which has not yet been systematically studied. Our focus is on the prediction of quantities with greatest significance to severe storm forecasters (i.e. updraft strength, low-level vorticity, surface winds, and rainfall). Idealized simulations are run using the WRF-ARW model with 333 m grid spacing. Each control simulation uses a thermal bubble to initialize a supercell. The results from the control simulation are then filtered at various stages of storm development using various cutoff wavelengths. New simulations are then initialized from the coarsened initial conditions and compared to the control simulations to assess the impact of the reduced resolution. Isolating the error due to limited initial condition resolution enables straightforward evaluation of the scales that need to be resolved by data assimilation to generate reliable model forecasts of various severe storm hazards.*

**P3 - Bryce Pelfrey** - Profile of Carotenoids in Fruits and Seeds from NW Louisiana – LSU Shreveport – Drs. Cran Lucas and Jim Ingold – Biology –

*There is rich color diversity among bird species. The vibrant reds, yellows, and oranges that some species display are due to carotenoid pigments in the tissues. These carotenoids, however, are not produced by the birds, and must be come from a dietary source. Some of these carotenoids may be used right away, while some may be modified before being present in the displaying tissues. Of particular interest to our research group are the carotenoid content of many berries and seeds thought to be food sources. These samples were collected from various locations around the NW Louisiana region. These samples were analyzed qualitatively to determine carotenoid content, if any. Carotenoids, being lipid molecules, were extracted with an organic extraction method and dried down for analysis. We used high performance liquid chromatography (HPLC) to determine the carotenoid content of the fruit or seed.*

**P4 - Amber Pete** - Synthesis and Characterization of Proto-Kerogen via Simulated Chitin Diagenesis - McNeese State University – Dr. Jacob Borden - Chemical Engineering. -

*Petroleum formation begins with organic matter (OM). Chitin is a type of organic matter found in shellfish. Chitin is a long- chain polymer of an N-acetylglucosamine, a derivative of glucose. Over geologic time and progressive burial, chitin and other OM undergo sequential catalytic modifications known as diagenesis, catagenesis, and metagenesis, resulting in the petroleum- forming intermediate known as kerogen. Catalytic activity is provided by aluminosilicate clays such as kaolin, feldspar, bentonite, and petalite. Over time and with progressive burial, temperatures rise into the "oil window" if 100-200°C. Within the oil window, organic matter is gradually converted into complex intermediates including fulvic and humic acids, eventually forming the petroleum precursor known as kerogen. For this experiment chitin was isolated from *Litopenaeus setiferus* using hydrochloric acid and sodium hydroxide. Reactors containing chitin-bentonite and chitin-water were incubated at 155°C for seven days. Data will be presented showing the impact of treatments on the volatility of the kerogen-like products.*

**P5 - Tasha Champagne** - Performance Cost of Motivational Deterrence during an Academic Task - The University of Texas at Tyler - Dr. Eric Stocks – Psychology -

*As cell phones become more common, they have the potential to be a distraction for students. In the present study, we assess the effect of cell phones on academic performance. Two competing hypotheses describe potential effects of distraction on academic performance. First, if cell*

*phones act as a distraction, then exposure to increasing levels of cell phone stimuli will result in a decrease in performance on an academic task. In contrast, Psychological Reactance Theory suggests that distractions can serve as a motivator. Specifically, this theory argues that a moderate level of distraction can increase performance, whereas too little or too much distraction can hinder performance. We conducted an experiment in which participants completed an academic task while being exposed to either a low level of cell phone notification noise, a medium level of this noise, or a high level of this noise. The results of this experiment suggest that support the claim that a moderate amount of distraction from cell phones improves performance compared to low- and high-levels of distraction from cell phones.*

**P6 - Zara Collins** – Open Mind – LSU Shreveport – Lisa Cooper – Education -

*My experience transitioning from a very open minded high school to LSUSvand what I have learned so far as an education major.*

**P7 - Finola Reed** - How Technology affects Small Businesses - University of Louisiana at Monroe - Dr. Elizabeth Stammerjohan – Marketing -

*Several interviews were conducted across the Northern Louisiana area with small business to discover how knowledgeable these microenterprises were about technology and how important technology is to the businesses. By using qualitative analysis, it was recognized SME's are adaptable and highly interested in using technology within their businesses. While they may feel disadvantaged as compared to larger corporations that can maintain individual IT departments, the small businesses that are technologically aware compete among top competitors on a local level. This research is from 16 interviews conducted by college level students for a large technology company.*

**P8 - Alexander, S, Devinney, M, Guidry, S, Phelps, T, and Sears, D** - Survey of Physical and Health Characteristics of Kinesiology and Health Science (KHS) Students at Louisiana State University Shreveport (LSUS) – LSU Shreveport – J. Demello - Kinesiology and Health Science -

*The purpose of this study was to survey the KHS students for various physical and health-related characteristics, life-style habits and personal and family history of chronic disease. Sixty-five women and 45 men agreed to participate. Their mean age (yrs), height (cm), weight (kg) and BMI (kg · m<sup>-2</sup>) were 23.1, 162.8, 70.1, 26.5, and 23.3, 179.3, 87.8, 27.2 for the women and men respectively. Participants were also measured for waist and hip circumference (cm), blood pressure (mmHg) and heart rate rest (bt · min<sup>-1</sup>). Mean results were 80.1, 105.1, 112.9/73, 77.9 and 89.7, 105.2, 122.3/78.9, 70.1 for the women and men respectively. The survey found 10% did not know their blood pressure, 25% didn't know their cholesterol, 5% were physically inactive, 10% were >20 lbs overweight, 5% had a family history of cardiovascular disease and 10% had a family history of diabetes. Customary significant differences were found in height, weight, BMI, waist circumference and waist to hip ratio between the women and men. The survey also found higher blood pressure for the men than the women and the heart rate to be higher for the women than the men.*

**P9 - Michelle Lepori** - Wounding Light: Hexagram 36 - University of New Orleans - Cheryl Hayes – Fine Arts -

*Based on the Chinese classic I Ching, specifically the Ming I section, "Wounding Light:*

*Hexagram 36" is an appropriation of the section's described strategy to hide one's abilities from others. The image of light, yang, is hiding behind the dominate yin's darkness. This classic text is a meditation on the consistency of change. Therefore, I chose to include images of the 5<sup>th</sup> century BC Western Zhou's bronze spade money, or bu, in the four corners of the square. These spades are in a molten state and giving way to the modern Chinese coin now used in I Ching divination. This coin is itself showing decomposition and the visual effects of change. I used encaustic, as its first known use coincides with I Ching's creation in 5<sup>th</sup> century BC. Encaustic means to burn in and thematically ties into the ideas of Ming I; a light source hiding, being injured, or eclipsed. Fusing, or torching the wax, causes the painting to move as it melts and one must adapt to its unpredictable ebbs and flow in order to create success.*

**P10 - Stephen Kreller - Which Hurricane Attributes are most Strongly Correlated with Maximum Storm Surge Height? - University of Louisiana Monroe – Ken Leppert II – Atmospheric Science -**

*Storm surge causes the most fatalities and property damage in hurricanes, so predicting what types of hurricanes cause the strongest surge is important. This project correlates storm surge height with many attributes of landfalling U.S. hurricanes between 1950-2012, including maximum and landfalling wind speed and minimum and landfalling sea level pressure. Maximum storm surge data were obtained from LSU's "SURGEDAT" database and the maximum wind speed and minimum sea level pressure at landfall and any point during the storm were determined using the NOAA HURDAT database. In addition, wind field shapefiles available for all hurricanes since 2003 and certain historical storms were gathered from the NOAA AOML site and analyzed using GIS software. The diameter, circumference, area, and symmetry of wind speed thresholds at landfall based on categories of the Saffir-Simpson Hurricane Wind Scale (i.e., tropical storms and category 1, 2, 3, 4, and 5 hurricanes) are investigated for each storm that has GIS shapefiles available to determine if they exhibit stronger correlations than wind speed or minimum pressure. Other tested factors include angle of the hurricane to the coast at landfall, the Hurricane Severity Index (HSI), wind field symmetry, and Accumulated Cyclone Energy for storms with these factors available.*

**P11 – Sara Whorton – Possible Control of the aquatic pest salvinia – LSU Shreveport – Dr. Stephen Banks – Biology -**

*Salvinia is known as the most troublesome aquatic pest. This aquatic fern is an invasive species that grows unchecked because of lack of natural predators in its new environments. Salvinia floats atop the water and can produce such a thick mass that it completely blankets the water surface. This blanketing causes waterway congestion that troubles recreation and is detrimental to submerged species by reducing light and reducing oxygen availability. A study has begun, Dr. Banks and myself, into possible ways of getting control of this aquatic pest. Ideally, finding a biological control that is self-sustaining would be best. This study, still in its infancy, has included; research, observation of salvinia in the wild, collection of salvinia, and establishing salvinia in tanks in the lab. The first proposed method of control considers aggressively applying natural pathogens. While in the process of following this line of inquiry, observations led to new possibilities to investigate. At one specific lake, salvinia is present but not proliferating. Lines of inquiry into this lake include; chemicals present in the water, allelopathic characteristics of sympatric water plants, and presence and effect of grass carp.*

**P12 - Nahu Merawi** - An Undergraduate Research Project: Creating and Android App to Control Boe-Bot Robot via Bluetooth Technology - Jackson State University - Drs. Ali Abu El Humos, Jacqueline Jackson, and Xuejun Liang – Computer Science -

*The purpose of this project is to train undergraduate Computer Science and Engineering students to integrate different technologies to enable an Android device communicate with a Robot. The students will develop an Android App using MIT App Inventor tool to control a Boe-Bot Robot from Parallax Inc. This project has two stages: first, students will learn how to use the MIT App Inventor toolboxes: User Interface, Layout, Media, Drawing, Sensors, Social, Storage and the Connectivity toolboxes. To assess students learning progress during this stage, every student is asked to develop his/her own Android app. In the second stage, students will first learn how to assemble and program the Boe-Bot Robot. Then, after learning about the RN-42 Bluetooth module, each student will build an advanced app to connect to and control the Robot through a Bluetooth Wireless link. This research is sponsored by the Center of Undergraduate Research at Jackson State University. A group of Computer Science and Engineering undergraduate students are participating in this project. This work is expected to evolve to use different App development tools as well as different types of robots.*

**P13 - Chris Bacarisse** - Advancing Scholarship: Fostering the Motivation to Research in Future Marketing Scholars - McNeese State University – Dr. Jeffery Stevens – Business -

*This article focused on defining what factors motivate a doctoral student to conduct research. There are three facets of the modern academic, teaching, service, and research, the focus of this project. Although they should try to balance the three, doctoral students tend to focus their attention on research. Graduate students must have some motivation to focus their attention on research. Obilo and Alford want to find out if there is a way to determine the factors that drive students to focus on research. If they have a positive effect, the goal is to cultivate them, if a negative effect, mitigate them. Obilo and Alford's research follows the Self-Determination Theory (SDT) and the Factors Influencing Research Motivation that includes: intrinsic motivation, extrinsic motivation, and failure avoidance. Obilo and Alford used the following factors: age, self-efficacy, role conflict and ambiguity, faculty quality, and emotional labor as the independent variables to determine whether or not they had a negative or positive influence on the doctoral student's intrinsic motivation, extrinsic motivation, or failure avoidance. (Obilo-Alford 2015)*

**P14 - Christopher Patterson**, Brittini Hood, Dawn Langston, Kristin Fuller, Ghazaleh Keyvan, Jessica Mast, Neelam Ali, Robyn Brown, and Samuel Crooks - Insect diversity measured across habitat type - LSU Shreveport – Dr. Amy Erickson – Biology -

*Lakes and rivers vary in physical and chemical conditions. Lakes are lentic systems which are characterized by standing water while rivers are lotic systems characterized by moving water. This difference can lead to variation in thermal stratification, turbidity, transparency, and the type of vegetation that grows adjacent to these aquatic ecosystems. This study examined whether or not there were differences in insect richness, diversity, and evenness in habitat growing adjacent to lakes versus rivers. To perform this study, insects were collected on three different days in Fall 2015 using a net and sweeping motion to capture the insects. After collection, the insects were identified to family and family richness, diversity, and evenness were calculated. The null hypothesis tested stated that lakes and rivers present similar richness and diversity.*

*According to the results, the null hypothesis was supported as no significant differences were found in insect family richness, diversity, and evenness.*

**P15 - Sarah Whorton**, Duchein Stinson, LaDestiny McKay, Adriana Simmons, Henna Ali, and Jessica Mast - The relationship between insect diversity and temperature and humidity- LSU Shreveport – Dr. Amy Erickson – Biology -

*Insects are highly abundant and often very diverse in terrestrial communities. This study looked for relationships between insect diversity and temperature and humidity. In this study, samples were collected from several locations on three separate occasions during Fall 2015. Insects were collected by sweeping 10x10m plots, stored in the freezer, and identified to family. Family richness, diversity, and evenness were calculated. To find if a relationship between those measures and temperature and humidity existed, correlation coefficients were calculated. The null hypotheses tested were that there were no relationships between insect community measures and temperature and humidity. No significant correlations were produced by the statistical analysis. However, a non-significant trend was found between humidity and richness of insects sampled which implied that increasing humidity is associated with decreasing insect diversity. Further research should be conducted on this topic during other seasons to see if relationships between the variables exist when accounting for greater variation in temperature and humidity.*

**P16 - Anthony Blankenship** - The Effect of Fusarochromanone on Breast Cancer LSU Shreveport - Drs. Elahe Mahdavian, Brian Salvatore, and Shile Huang – Chemistry -

*Fusarochromanone (FC101), a fungal metabolite, has been found to possess anti-proliferative and anti-apoptotic effects on rapidly growing cells by inhibiting the cell cycle progression from G1 to S phase and by activating caspase pathway required for program cell death. However, the underlying molecular mechanisms are not yet understood. Here we show that FC101 inhibits cell proliferation by downregulating the expression of the cell cycle regulatory proteins cyclin D1, CDK4/6, and Cdc25A. FC101 induces apoptosis by activation of caspase cascade. Also, FC101 inhibits mTOR, but activates JNK pathway. The results indicate multiple signaling pathways may be involved in the anti-cancer effect of FC101.*

**P17 - Ryan Grant and Pearline Davis** - Synthesis of Caffeic Acid Analogs with Improved Drug-Like Properties - LSU Shreveport - Drs. Elahe Mahdavian and Brian Salvatore – Chemistry -

*Caffeic acid, CAPE-ester, and their analogs hold many interesting anti-cancer and anti-oxidant activities. This project dictates the synthesis of a caffeic acid analog using the scaffolding of 2-naphthol. This structure was chosen due to the ease of manipulating the placement of functional groups on the scaffold, as well as the conformational restriction of the scaffold itself. Bromine was placed ortho to the hydroxyl group on C6 on 2-naphthol via an electrophilic aromatic substitution reaction, yielding 1-bromo-naphthalene-2-ol. Then, the hydroxyl group on C6 was methylated via a methylation reaction using methyl sulfate as the methylating agent, yielding 1-bromo-2-methoxy-naphthalene. Then, a Friedel-Crafts reaction using acetyl chloride added an acetyl group on C2 of the naphthalene base, resulting in 2-acetyl-5-bromo-6-methoxy-naphthalene. Next, the methyl group at the end of the newly added acetyl group was replaced with a hydroxyl group via a bromoform reaction. During the synthetic pathway, several issues were encountered. The Friedel-Crafts reaction was a bottleneck in the pathway, as several unwanted byproducts were formed, even with strict reaction control. The future steps of this*

project are to synthesize further compounds for testing in various cancer cell lines via Incucyte high throughput screening.

**P18 - Theresa M. Hernandez and Duchein Stinson** - Effects of Fusarochromanone on AMPK and ULK-1 Protein Expression in Melanoma Cancer - LSU Shreveport - Drs. Ashley Fitzgerald, Elahe Mahdavian, and Brian Salvatore and – Biology (AF) Chemistry -

*Fusarochromanone (FC101) is a mycotoxin and an effective drug capable of arresting the cell cycle in the G<sub>1</sub> phase and inducing apoptosis in cancer cells. Our lab has shown evidence that FC101 can modulate signaling pathways involved in tumor suppression and cell death. The purpose of this study was to determine the effects of FC101 on 5' AMP-activated kinase (AMPK) protein expression, and activation of autophagy in SK-Mel28 Melanoma cells. We hypothesize that FC101 decreases activation of AMPK. SK-Mel28 were treated for 24hrs. with varying concentrations of FC101. Cell lysate was collected and subjected to western blotting analysis. Blots were probed for pAMPK, AMPK, pULK1, and ULK1. GAPDH was used as a loading control. FC101 decreased pAMPK expression. Total ULK-1 expression was detected only at 1  $\mu$ M and 5  $\mu$ M treatment of FC101. There was no pULK1 expression detected in SK-Mel28 cells at 24hrs of drug treatment. We wanted to determine if AMPK is a possible target of FC101; if so what response would the cells elicit by AMPK in response to FC101. The role AMPK and its upstream and downstream regulators remains to be further elucidated.*

**P19 – Kate Inchun** – Characterization of the interactions between model RNA, protein, and bio-relevant nanoparticles – Kansas State University – Dr. Robert DeLong – Anatomy and Physiology –

*Within cells, RNA & proteins interact to form nanostructures such as ribosomes, spliceosomes, etc. Nanoparticles enter cells and the effect that they have on these RNA:Protein structures is currently unknown. We have used a model RNA and protein to investigate the effects of the addition of nanoparticles. Poly IC is a double stranded RNA whose biological effects mimics viruses and possesses anti cancer properties. Protamine is a protein similar to histone proteins which bind to DNA in chromosomes, which our group has previously shown also binds RNA to form Protamine:RNA nanocomplexes. Poly IC:Protamine interaction was detected using gel electrophoresis and zeta potential. Based on previous research from our lab and others, we selected zinc oxide (ZnO), boron carbide (B<sub>4</sub>C), and magnesium oxide (MgO) nanoparticles for their biological implications. The mean zeta potential values for these nanoparticles alone in ddH<sub>2</sub>O are: 30.1 for ZnO, -43.3 for B<sub>4</sub>C, and 9.53 for MgO. The mean values after the addition of Poly IC:Protamine are: 23.6 for ZnO, 26.9 for B<sub>4</sub>C, and 13.9 for MgO. The direction of bands found in the gel was consistent with the charges in the zeta potential readings. The fluorescence spectral signatures found also showed proof of interaction through changes in emission intensity at a given wavelength.*

**P20 - Robert Bertrand** and Justin Gary - The Impact of pH on the Products of Hydrothermal Biomass Liquifaction - McNeese State University – Dr. Jacob Borden - Chemical Engineering

*In this study, thermogravimetric analysis (TGA) was used to evaluate the impact of pH treatment on the products of simulated diagenesis. Sugarcane bagasse and the lignin derived from it were used as the biomass in this experiment. Lignin was obtained by strong acid treatment of sugarcane bagasse, and diagenesis was simulated using isochoric reactors held at*

150 C for one week. Reaction products were then characterized by TGA. The results indicate that treatment of pH impacts the volatility of the products of simulated diagenesis.

### **Poster Session - Graduate Student Poster Presentations**

**P50 - Christina Higgins**, Divya Patel, Sandra Ahmed, Rachel Wooler and Cortni Smith - Digital Satisfaction: Examining Technology in Interpersonal Relationships - The University of Texas at Tyler - Dr. Eric Stocks – Psychology -

*The effect that technology has on interpersonal communications is an extremely important area of research in the social sciences, given the prevalence of communication technologies. We conducted a study to determine the level of satisfaction individuals feel when various communication technologies are used for interpersonal communication. The study tested the hypothesis that technology has a negatively impact on family closeness and satisfaction. Results show that some common communication tools are effective in facilitating relational communication and increasing individual satisfaction, particularly when the parties are unable to communicate face to face. The research also shows that participants feel unsatisfied when technology is involved in face to face communication.*

**P51 - Angie Pellerin** - Integrating Feminist, Narrative, and Exercise Therapies in Group Psychotherapy with Female Trauma Survivors – LSU Shreveport – Dr. Meredith Nelson – Psychology -

*Negative psychological impacts of power and oppression have been studied from various theoretical orientations, including humanist, feminist, and multicultural approaches. Narrative therapy was further conceived to address emotional struggles resulting from oppressive dominant discourses. Forms of interpersonal violence commonly targeting female victims, such as childhood sexual abuse, spousal abuse, and sexual assault, are inherently tied to both social and political power structures. While treating interpersonal violence from a trauma-focused perspective has become widely accepted in the mental health profession, sociopolitical factors relevant to the higher prevalence of females as victims necessitates an integrated feminist therapy approach to treating interpersonal trauma in females. Trauma research has also examined the significant somatic impact of psychological trauma on the body, and in turn, the use of body-oriented therapies, particularly yoga, is proving greatly beneficial in treating psychological distress and impairment resulting from traumatic experiences. Therefore, incorporating a feminist-narrative-exercise combined modality can provide optimal healing and growth in female victims by aiming to confront power and oppression in gender relations and challenging dominant narratives of women as weak and helpless. Actively engaging in group yoga in an all-female setting can help clients claim an alternative narrative, thereby fostering self-awareness, sense of community, and empowerment.*

**P52 - Jesse Johnson** & Amanda Shackleton - Do I Have To Read It Again? Effects of Repeated Reading on Reading Maintenance and Generalization – LSU Shreveport - Dr. Kevin Jones – Psychology -

*This study looked at the effects of repeated reading on reading maintenance and generalization. Repeated reading is a technique that involves a student rereading a passage until they meet a certain criterion level. Research has shown that this technique is effective in improving reading fluency and other aspects of reading achievement (Therrien & Kubina, 2006). Researchers*

*observed whether reading the same text repeatedly (repeated reading) is significantly more effective than reading the same amount of text (sequential reading). Participants in the study were eight children who had completed the second grade. An alternating treatments design was used to show the effects of repeated reading. Results showed that repeated reading led to significantly higher rates of maintenance and generalization in oral reading fluency than sequential reading. Implications for future research and supplemental reading programs are discussed.*

**P53 - Sir Aaron Mason and Jacinda Whitley** - Semantics and Politics of Coupling within a Technological Age - University of Louisiana at Monroe - Carl "Van" Frusha, Ph.D. - Marriage and Family Therapy -

*With the growth of technology, social media has become an enduring component of society. As social media inundate modern cultures, couples are tasked to organize in new ways. Therapists who are charged to help couples with a myriad of issues, infidelity, sexual dysfunctions, and parent-child issues, to name a few, are also tasked to organize in new ways. There is a lack of understanding in the field of marriage and family therapy of how social media influences couples' interactions. The purpose of this study is to identify the meaning couples make of their social media usage and how the meaning made by couples shape their interactions. We aim to provide a recursive understanding of couples' interactions based how they punctuate their social media use. This presentation will provide attendees with an overview of the literature and the theoretical foundation guiding our study, as well as our proposed qualitative methodology*

**P54 - Cortni Smith**, Sandra Carballo, and Rachel Wooler - Reciprocity Norm in Everyday Communication - The University of Texas at Tyler - Dr. Eric Stocks - Psychology -

*The length of communication between two participants was altered across six experiments in order to measure reciprocity (mutual exchange) norm-following behavior during conversational interaction. Studies 1 and 2 used scripts in an online chat that differed in length, and the chat logs were later analyzed. In Studies 3 and 4, participants emailed scripts that differed in length to acquaintances, and the replies were later analyzed. Studies 5 and 6 used a confederate to initiate conversations with either acquaintances or strangers, and we recorded the length of their responses. The results across all six studies suggest that people conversing will reciprocate length of conversation across different means of communication media, regardless of the depth of the disclosed information.*

**P55 - Elizabeth Cockerham**, Samantha Murphy, Madison Wynne, Amber Williams, Dominique Washington, and Phoebe A. Rollyson, and Ethan Branch. - Identification of FC101-Interacting Proteins in MDA-MB 231 and MCF7 Cell Lines – LSU Shreveport – Dr. Tara Williams-Hart, Dr. Elahe Mahdavian, Dr. Cran Lucas, and Dr. Ashley Fitzgerald – Biology and Chemistry (EM) –

*Fusarochromanone (FC101), a mycotoxin and potential therapeutic agent produced by the fungus *Fusarium equiseti* that possesses interesting anti-tumor capabilities. FC-101 is a small molecule capable of inducing apoptosis and reducing angiogenesis in human cancer cells. Thus far, human bladder cancer (UM-UC-14) was discovered to be the most sensitive to FC-101 when compared to breast, prostate and skin cancer cells. Previous studies focused on identifying molecular targets of the drug using cDNA microarray analysis and immunoprecipitation to better understand how FC-101 inhibits tumor growth. Also, in UM-*

*UC-14 cells, we identified differentially expressed genes responsible for pathways integral to cell proliferation such as DNA repair, ubiquitylation and histone deacetylation. This study focuses on the isolation of FC-101 interacting proteins in bladder cancer cells (UM-UC-14 and SV-HUC-1) and in breast cancer cells (MDA-MB 231) and (MCF7) using a novel technique known as Drug Affinity Responsive Target Stability (DARTS). Mass spectrometry will be performed to identify the isolated proteins of interest.*

**P56 - Kami A. Winship, Keiston L. Reece, and Donald Stilwell** - Effects of Personality and Mood on Perception of Others: A Study of Shifting Standards and Social Projection - The University of Texas at Tyler - Dr. Eric Stocks – Psychology –

*The purpose of the present research was to investigate two hypotheses about the perception of others: (1) observers judge the actions of others in reference to the group to which they belong (which we titled the shifting standards hypothesis), and (2) observers also project their own personality characteristics onto others during the judgment process, (which was titled the projection hypothesis). In Study 1, participants reported their perceptions of people from different groups engaging in group-atypical behavior. The results supported our first hypothesis, that observers would shift their judgements of characters based on the standards implied by the character's group membership. In Study 2, the same procedure was used, except participants also reported their own levels of introversion and extroversion. The results supported both hypotheses. In Study 3, a third personality dimension, agreeableness, was added to the procedure. The results supported the first, but not the second, hypothesis. Situational factors that influence when projection occurs and the future research that will be necessary to further pinpoint the relationship between these variables will be presented.*

**P57 - Kayla Marsalis and Hollie Horton** - O.C.D. – Organization for Cool Digits – LSU Shreveport – Dr. Kevin Jones – Psychology -

*Is a picture worth a thousand words? Graphing provides students with a visual representation of their progress and a way to anticipate future performance (DiGangi, Maag, & Rutherford, 1991). When performance data are consistently measured and displayed graphically, student achievement increases significantly in comparison to when the data are simply recorded (DiGangi et al., 1991; Farrell & McDougall, 2008; Figarola et al., 2008). The purpose of this study was to examine the effects of goal-setting and self-graphing on student productivity and quality of work in math, as well as on-task behavior. Eight children, who had just completed 2nd grade, participated in a 4-week summer program (School of R.O.C.K.: Reading and Organization for Cool Kids). Results showed that self-graphing the number of attempted problems had a strong effect on productivity without detrimental effects to quality of work or on-task behavior. Implications for future research and educational practice will be presented.*

**P58 - Jeremy Bell** - Principal's Attitudes about Provisions for Students with Disabilities and Leadership Style - LSU Shreveport - Dr. Iris Johnson – Educational Leadership -

*Students with disabilities have many barriers preventing success in schools and many of these barriers can be overcome through the deliberate actions of the principals and the teachers. With the increased rigor in academic standards associated with the implementation of Common Core State Standards and the Partnership for Assessment of Readiness for College and Career (PARCC), the school accountability process has been altered. The bar has been*

*raised, leaving a significant challenge for students who have disabilities. Principals are held accountable for performance of all students in their schools. This study will explore the effects of these changes and how the new curriculum and accountability standards have changed principal's attitudes towards services for students with special needs. This study will also investigate the relationships between the principals' leadership style and decisions made concerning students with disabilities. Among the many questions to be answered the purpose of this study is to attempt to find common ground among educational leaders on the changes in education and the consequences of these changes as related to higher standards, leadership style, and students with disabilities.*

**P59 - Tracey Burrell** - Exploring the Relationship Between Emotional Intelligence and Spiritual Leadership in African American Pastoral Leaders - LSU Shreveport - Dr. Melissa Hawthorne – Educational Leadership -

*This research study investigates significance of emotional intelligence in the spiritual leadership of groups of African American pastor leaders. Data will be collected using the Bar-On Emotional Quotient Inventory (EQ-i) and the Spiritual Leadership Scale (SLS). A multiple regression analysis will be used to predict spiritual leadership dimensions by examining the overall emotional quotient of pastors, as well the individual scales identified in the Bar-On Model of Emotional Intelligence. The sample (N = 75) consists of African American executive pastors who lead churches affiliated with the National Baptist Convention USA.*

**P60 - Walter Brown** - Teachers As Leaders: The Preferred Leadership Style and Self-Efficacy of National Board Certified Teachers vs. Non-National Board Certified Teachers - LSU Shreveport - Dr. Iris Johnson – Educational Leadership -

*This study explores the connections among status as a National Board Certified Teacher (NBCT), a sense of self-leadership (or self-efficacy), and preferred leadership styles. Participants (N = 200) who have been selected as Teacher Leaders for the Louisiana Department of Education from 2012-2014 will be further identified as NBCTs or non-NBCTs and asked to complete two instruments: the Leadership Efficacy Questionnaire (LEQ) and the Multifactor Leadership Questionnaire (MLQ). Results will assist in measuring the participants' sense of self-efficacy and their preferred leadership style. Predictions are that NBCTs will have a higher sense of efficacy and demonstrate traits of Transformational Leadership style, more so than the non-NBCTs. Limitations of the study include the reliance on self-reporting and inherent feelings regarding leadership.*

**P61 - Christina Albert** - Reading Match-Up: The Effects of Matched Instruction on Oral Reading Fluency - LSU Shreveport – Dr. Kevin Jones – Psychology –

*Reading and comprehension skills are the foundation of academic success for elementary school students. Unfortunately for many students, when school ends and summer begins reading is not enforced and previously learned skills may begin to decline. This lack of reading growth is often referred to as summer reading setback (Allington et al., 2010). In an effort to reduce summer reading setback and strengthen reading skills, the LSUS Psychology Department offered a summer reading program to local students who had just completed the second grade. Participants were engaged in a variety of reading activities which were tailored to their individual reading needs in order to increase reading fluency. Pre- and post- test measures were used to examine the effects of matched instruction on students' oral reading fluency rates.*

*Results of this study showed an increase in students' oral reading fluency rates when receiving matched instruction.*

**P62 - Belvia Brock** - Mediating Effects of Newo-Machiavellian Pragmatist Practices as Evidenced in Contemporary Instructional Leadership Behaviors Among Secondary School Administrators - LSU Shreveport - Dr. Iris Johnson – Educational Leadership -

*The purpose of this study is to identify the most-prevalent types and effects of neo-Machiavellian pragmatist (Buchanan & Badham, 2013) practices in secondary school culture. This study considers previously identified constructs of abuses and misuses of administrative power as enacted within the new- Machiavellian pragmatist paradigm and the definitions of such by faculty and staff. A consequent aspect under consideration is the fallout resulting from either overt or covert attempts to bring about beneficial change in the administrative methods and measures under study. Much of the study's framework rests in Blase's (1987) investigation of teachers' conceptualization and identification of effective or ineffective behaviors of administrators.*

**P63 - Rachel Wooler, Divya Patel, Sandra Ahmed, Cortni Smith, and Christina Higgins** - Emotion and Rumination - The University of Texas at Tyler - Dr. Eric Stocks – Psychology -

*The purpose of this study is to explore the association between the focus of rumination and the emotional responses, empathetic concern and distress. The hypothesis states that empathetic concern predicts anticipated rumination about the victim's situation, and distress predicts anticipated rumination about the victim. Participants were asked to read an article about Jane Seiber, a patient undergoing treatment for myeloid leukemia and then complete questionnaires measuring emotional response and anticipated rumination. Two different forms of rumination were examined by asking the participants to what extent they anticipated thinking about Jane verses to what extent they anticipated thinking about Jane's situation over the next 60 minutes. The results showed that empathetic concern was significantly correlated with anticipated rumination about the situation, but not with rumination about the person. Distress was significantly correlated with anticipated rumination about the person, but not with rumination about the situation within the specified timeframe. Therefore, the results supported the hypothesis that distress was mainly associated with anticipated rumination about the victim, and empathic concern was mainly associated with anticipated rumination about the victim's situation.*

**P64 Alicia Stewart** - Being a Good Shepherd: Raising Class Performance by Shepherding the Lowest Performer - LSU Shreveport – Dr. Kevin Jones, Dr. Katherine Wickstrom – Psychology

*The purpose of this study was to examine the effects of increasing the percentage of active engaged time of the lowest performing student in attempts to improve academic engaged time of the entire class. Additionally, the percentage of academic engaged time was also compared to the total number of words written during the intervention period. Participants were nine 2<sup>nd</sup> grade children who were entering third grade. A multiple baseline design was used to evaluate the effects of social influence on academic engaged time during a 4-week summer program. Research suggests that in situations where people are unsure of correct behaviors, individuals conform to the actions of others with the belief that those individuals are displaying the correct behavior (Aronson, Wilson, & Akert, 2005). The literature on social proof in relation to social influence, the results of the study, and implications for educators will be discussed.*

**P65 - John Brettny** and Carli Boyd – At What Point Does an Assembly of Individuals Resemble a Single, Unified Group - The University of Texas at Tyler - Dr. Eric Stocks – Psychology - *How many people does it take to look like a group? To answer this question, we conducted experiments in which participants viewed sets of images that varied in the number of individuals depicted, and participants identified the point at which the assemblage was perceived to be a group. We also manipulated the gender and race (Experiment 1), as well as the age and realism of representation (Experiment 2) compositions of images to assess the generalizability of the findings. The results suggest that approximately five to six people constitutes the point at which persons are perceived less like separate individuals and more like a single, unified group. However, the number of individuals depicted that participants perceived as a unified group was smaller for simpler compositions and larger for more complex compositions.*

**P66 - John Brettny** – The Effect of Pleasant and Unpleasant Social Interactions on Perceived Self-Efficacy - The University of Texas at Tyler - Dr. Eric Stocks – Psychology - *The effect of perceived self-efficacy on performance has been studied extensively. Specifically, studies have shown that high self-efficacy generally increases performance, whereas low self-efficacy generally decreases performance. The present research, instead, seeks to understand how performance (in this case, during social interactions) influences perceived self-efficacy. In the present experiment, participants were asked to recall either a pleasant or unpleasant social interaction and were then prompted to answer questions about their perceived self-efficacy. We predicted that self-efficacy would be higher for participants who relived a pleasant social interaction compared to those reliving an unpleasant social interaction. The results support this prediction.*

**P67 – Molly Folkerts** - Variation in Green Heron nesting success in coastal Louisiana Marshes – Katie Percy, Erik J. Johnson, Karen Westphal, Timothy J. Vincent, and James L. Ingold – LSU Shreveport (MF, JLI), Audubon Louisiana (KP, EJJ, KW, TJV) - *Green Heron (*Butorides virescens*) nests were surveyed in coastal marshes at Audubon’s Paul J. Rainey Wildlife Sanctuary, Vermilion Parish, LA, during the breeding seasons of 2013 to 2015 to determine factors affecting nest success and to discover possible explanations for population declines. We banded 142, 139, and 220 chicks in each year, the largest number of Green Herons that have ever been banded. We used program MARK to examine the relationship between nest success and the extent of nest aggregation, pond proximity, water level fluctuation, navigation canal versus natural bayou habitat, nest tree characteristics, and temporal variation. We built competing nest survival models and used model averaging to estimate daily nest survival rate, which was 0.968 (SE = 0.002). Prior to 2015 data collection, the most parsimonious model was the simplest one, which involved no covariates and no time dependence. However, single covariate models involving nearest temporal neighbor distance (range 5 – 6346 m), canal type (man-made canals versus natural bayous), and year had model likelihoods greater than 0.50 and were within 2 AICc units of the top model, suggesting strong support for these competing models. We found a weak negative relationship between nearest temporal neighbor distance and nest survival. In 2015 we increased surveys of natural bayous, and partial analysis with the new data has revealed the most parsimonious model to be one involving survival as a function of year and canal type. Results provide evidence for higher survival in natural bayous than in man-made canals. With 206, 244, and 167 active nests located each year since 2013, the Paul J.*

*Rainey Wildlife Sanctuary supports some of the largest nesting concentrations of this species in the U.S., suggesting that Louisiana's Chenier Plain deserves conservation attention for reversing population declines.*

**P68 - Dustin McCallum** and Sterling Gill - Thermo-catalytic conversion of *S. Cerevisiae* using natural aluminosilicate clay catalysts - McNeese State University – Dr. Jacob Borden - Chemical Engineering. -

*Petroleum formation begins with organic matter (OM). Over geologic time and progressive burial, OM undergoes sequential catalytic modifications known as diagenesis, catagenesis and metagenesis, resulting in the petroleum-forming intermediate known as kerogen. Yeast is present during these periods and helps convert free sugars and other macro-molecules while also becoming part of the OM in kerogen. Catalytic activity is provided by aluminosilicate clays such as kaolin, feldspar, bentonite and petalite. Over time and with progressive burial, temperatures rise into the “oil window” of 100 – 200°C. Within the oil window, OM is gradually converted into complex intermediates including fulvic and humic acids, eventually forming the petroleum precursor known as kerogen. In this research, yeast was mixed with bentonite clay, placed inside a steel tubular reactor and incubated for 7 days at 150C. Data will be presented showing the impact of treatments on the volatility of the resulting kerogen-like intermediates.*

**P69 - Jessica Mast** - Amaal Al-wadi, Katrina Zeidan, Destiny Miller, Chris Bardwell, Michael Candler - How distance to water affects insect diversity - LSU Shreveport – Dr. Amy Erickson – Biology -

*Habitats surrounding bodies of water tend to support abundant insect communities. A study was conducted in the Shreveport-Bossier area in Fall 2015 to assess the influence of distance from a body of water on insect diversity, richness, and evenness. It was hypothesized that greater distance from water will decrease diversity, richness, and evenness of insect families. Samples were collected from six different locations during the months of September, October, and November in Fall 2015. Insects were collected by using a sweep net and samples were taken in multiple 10x10m quadrats both at 10 m and 30 m from the edge of the water bodies. The samples were stored in the freezer until identification which was to insect family. The samples were then analyzed for diversity, richness, and evenness. A t-test was performed to determine if any differences in insect measures were found based on the distance from the water's edge. The results indicated no statistically significant differences in insect diversity, richness, and evenness, suggesting that habitat found in both locations is similar enough to support similar insect communities.*

**P70 - Jessica Mast.** Jordan Anderson, Monica Alvarez, Tiffany Gomez, Chelsey Jordan, Katie Wren, Karishma Rao, Chelsea Streets, and Kaleb Williamson - Influence of flooding on insect diversity in Northwest Louisiana - LSU Shreveport – Dr. Amy Erickson – Biology –

*Floods have detrimental effects on ecosystems worldwide. They can severely reduce habitat cover and kill and displace wildlife. During the summer of 2015, the Red River flooded surrounding habitat in Shreveport and Bossier City, Louisiana, reaching a crest of about 37 feet in early June. This study was designed to examine whether the flooding had any effect on insect richness, diversity, and evenness surrounding bodies of water. In order to evaluate whether the*

*flood had an effect on the above community measures, samples were taken in Fall 2014 and Fall 2015 and compared. Insects were collected across several locations, stored in the freezer, and identified to family. The null hypothesis was that there were no differences between pre- and post-flood values. Results suggested there were no differences in pre- and post-flood values. The insect community seemed to be resistant or resilient to disturbance cause by the flood.*

**P71 - Sandra Carballo Ahmed, Cortni Smith, Rachel Wooler - Perspective Taking - The University of Texas at Tyler - Dr. Eric Stocks – Psychology –**

*Perspective taking, the manner in which one attempts to comprehend the cognition and emotions of another person, is imperative to social existence (Galinsky, Ku, & Wang 2005). In spite of this, little research has been directed on the subject, and most are exclusively set in the laboratory. The following study seeks any inconsistencies between laboratory-based research versus field research on perspective taking, along with answering questions such as (a) whose perspective is automatically taken by individuals, (b) how does the process occur when not prompted by laboratory instructions, and (c) how is this process triggered by different situations? Data was compiled from two studies on perspective-taking activity. The first was gathered from non-student adults in public areas over the East Texas region that completed a short questionnaire, while the other from student volunteers who kept a perspective-taking diary in which they completed an altered version of said questionnaire. Hence, both retrospective and prospective perspective-taking activities were measured. The results yielded consistent information between the two groups of studies, as well as conceptualizations of perspective taking in laboratory settings.*

**P72 - Melissa Seaman and Ja'Visha Yates - A Comparison of Methods for Identifying Reinforcers - LSU Shreveport – Dr. Kevin Jones – Psychology -**

*Behavioral management strategies requiring the use of positive reinforcement can be successfully implemented in schools if effective reinforcers for students are identified (Rush, Mortenson, & Birch, 2010). The purpose of this study was to compare the accuracy of nomination survey and verbal forced choice assessment methods at predicting reinforcers that will increase the academic work production of students. Such preference assessment methods have commonly been used to identify effective reinforcers for children with developmental disabilities. Participants were seven second grade children attending a 4-week summer program. A multi-element design was used to evaluate the reinforcement value of rewards and determine the accuracy of the nomination survey and verbal forced choice assessment methods. Results revealed that verbal forced choice was more accurate than the nomination survey. Literature addressing the effects of nomination survey and verbal forced choice assessment methods on diverse populations will be reviewed. Implications for educational practice will be presented.*