



UNIVERSITY *of* WEST FLORIDA

Scholars Week 2013

“A Celebration of Ideas”

PROGRAM & ABSTRACTS





UNIVERSITY *of* WEST FLORIDA

*Scholars
Week 2013*
“A Celebration of Ideas”

April 23 - 26, 2013
Programs & Abstracts

Editors:

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Event Organized By:

UWF Faculty ADVANCE Program
Office of Undergraduate Research
Office of Research and Sponsored Programs
The University of West Florida Graduate School
Women's Studies Program
Northwest Florida Society of Women Engineers
UWF Society of Women Engineers

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Additionally, we thank our volunteer judges and Johan Liebens for coordinating judging. We would also like to thank the Symposium Planning Committee; Jane Caffrey, Zhiyong Hu, Tressa Kelly, Gian-Nguyen Nguyen, and Xuan Tran.

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Thank You

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I am happy to welcome you to the University of West Florida for Scholars Week and congratulate the students and faculty on their academic achievements. Your diligence and hard work are to be commended. This year, we are delighted to have the opportunity to celebrate these accomplishments with the UWF ADVANCE keynote and Annual Showcase, Women's Studies Conference, Women in STEM Symposium and Student Scholars Symposium.



Best wishes to you in your future academic endeavors. Please enjoy your time on campus with us.

Sincerely,
Judith A. Bense, Ph.D.
President

The Graduate School and the Office of Research and Sponsored Programs are delighted to welcome you to Scholars Week 2013 at the University of West Florida. Research is vital to UWF's mission. Our faculty and students are actively engaged in helping solve research questions that are important to our region. The series of events this week illustrate that inspiring scholarship that our faculty and students engage in.



The Student Scholar Symposium in particular is a magnificent showcase of undergraduate and graduate student research, often conducted in partnership with faculty mentors. We extend a special acknowledgement to the faculty who mentor these students and introduce them to the exciting world of academic research. We also thank the UWF Faculty ADVANCE team for their leadership in supporting keynote speakers for Scholars Week 2013.

Richard Podemski, Ph.D.
Associate Vice President for Research
Dean of the Graduate School

I am pleased to welcome everyone to the University of West Florida's Scholars Week. This unique event provides an opportunity for both graduate and undergraduate students from the College of Arts and Sciences, the College of Business, and the College of Professional Studies to be recognized for their scholarly and creative work by fellow students, the faculty and others.



Please accept my best wishes for your life and work in the weeks, months and years ahead.

Sincerely,
Martha D. Saunders, Ph.D.
Provost and Vice President for Academic Affairs

One of our most defining features at UWF is the hands-on, high-impact experience our students can have working side-by-side with our researchers and scholars. The Student Scholars Symposium provides a great opportunity to go public with the process and the outcome of such learning experiences. It is great to see this event continue to grow as a showcase for all that's best about UWF.

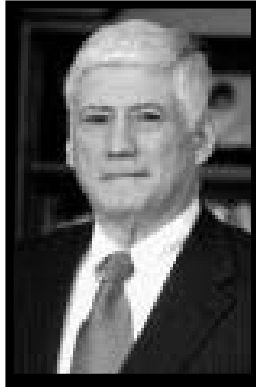


Congratulations to Pam Vaughan and the committee for reminding us all why we do what we do.

Jane Halonen, Ph.D.
Dean of the College of Arts and Sciences

Welcome

Scholars



To all faculty and students participating in the University of West Florida's Scholars Week, I extend my congratulations. As a Dean, I feel very fortunate to be a part of an institution that fosters collaboration between faculty and students in educational pursuits. This week showcases the exceptional educational experience offered at UWF.

Sincerely,
Ed Ranelli, Ph.D.
Dean of the College of Business

On behalf of the College of Professional Studies, I extend my congratulations to the faculty and students who are presenting their research at UWF's Scholars Week. This week highlights the very best of faculty-student collaboration on creative and scholarly pursuits, and showcases the wonderful opportunities that UWF provides for students who seek to distinguish themselves beyond the classroom.

We encourage you to continue striving for excellence in your future academic endeavors and your careers. You should be proud of your hard work and achievements.

Pamela Northrup, Ph.D.
Dean of the College of Professional Studies



*Welcome
Scholars*

Scholars Week Event Schedule

Tuesday, April 23

5:30 pm NSF UWF Faculty ADVANCE Keynote Address
SSE Auditorium (bldg. 4, room 102)

Wednesday, April 24

10:00 am-6:00 pm Women's Studies Conference
Conference Center

Thursday, April 25

8:30 am - 1:00 pm Women in STEM Symposium: Discovering the Engineer Within
Conference Center

1:00 - 5:00 pm Student Scholars Symposium
Field House and Argo Athletic Club

5:00 pm Awards Ceremony
Field House

Friday, April 26

8:45 am - 12:30 pm NSF UWF Faculty ADVANCE Annual Showcase
Conference Center

NSF ADVANCE Program Welcome



Welcome to the UWF Faculty ADVANCE Keynote Address and Annual Showcase! The UWF Faculty ADVANCE Program is a university-wide, systemic program supported by the National Science Foundation that focuses on enhancing a supportive and inclusive culture for recruiting, retaining, and advancing women faculty in STEM fields.

The ADVANCE team is delighted to help coordinate the inaugural UWF Scholars Week. The ADVANCE Annual Showcase is an exciting opportunity to celebrate the contributions and accomplishments of the program, scholars, and partners. Congratulations to everyone who helped make the ADVANCE Program and Scholars Week a success!

Eman El-Sheikh, Ph.D.
Principal Investigator and Director, NSF ADVANCE Program
Associate Dean, College of Arts and Sciences

NSF ADVANCE Program Schedule

April 23 NSF ADVANCE Keynote Address SSE Auditorium (bldg. 4, room 102)

5:30 pm Reception

6:00 pm Keynote Address
“That None Shall Perish”
Dr. Kelly Mack
Executive Director, Project Kaleidoscope
Association of American Colleges and Universities



April 26 NSF UWF Faculty ADVANCE Annual Showcase Commons Conference Center

8:45 – 9:00 am Continental Breakfast

9:00 – 9:50 am Keynote Address
“Unearthing Potential: A Journey from the Farmhouse to the Presidency”
Dr. Judy Bense
President, University of West Florida

9:50 – 10:00 am Break

10:00 – 10:45 am UWF Faculty ADVANCE Program Highlights
The presentation will include:

- an overview of the ADVANCE Program, including 2012-13 activities
- recognition of the ADVANCE Scholars, award recipients, committees and partners

10:45 – 11:00 am Break

11:00 – 11:30 am Lunch and Informal Discussions

11:30 – 12:30 pm UWF ADVANCE Culture and Climate Survey Results
Lunch continues during the presentation.



Women Studies Schedule

Wednesday, April 24

9:45-10:00 am Setup
10:00-10:10 am Opening Remarks
10:15-10:30 am Rebecca & Lauren Cleary: "Dog Days Are Over" Performance

Women in Politics

10:35-10:50 am Natalie Kortus: "Does Women's Partisanship Really Affect Politics?"
10:55-11:10 am K'yone Johnson: "Social and Economic Correlates of Rates of Abortion in the Russian Federation and the United States"

Women In-Between the Pages

11:15-11:30 am Rebecca Raley: "My Fate Depends on Having Sons: Male Castration and Female Objectification in The Castle of Otranto"
11:35-11:50 am Shannon Hemmings: "Blueberry Hill" Monologue by Christine House
11:55-12:10 pm Ashley Rawlinson: "The Tragedy of Romeo and Juliet: Where Marriages Fail and the Decadence of Men Flourishes"
12:15-12:30 pm Rebecca Namniek: "Great Hera!: War, Politics, and Wonder Woman"

12:30-1:40 pm Lunch and Keynote Speaker (Recipient of Mary Rogers Faculty Award)

Artistic Expressions

1:40-1:55 pm Zachary Giberson: "Maybelline"
2:00-2:15 pm Morgan Arnett: "Rising", "Predetermined" & "It Wasn't Mine"

Women's Cultural and Societal Issues

2:20-2:35 pm Melissa Williams: "This Princess is NOT in Another Castle: Feminism's Struggle for Survival within Geek Culture"
2:40-2:55 pm Jessica Thurmond & Raquita Peasant: "The Differential Experience of Childhood Maltreatment Between Genders: Is it Really Different?"
3:00-3:15 pm Devin Blackmarr: "1960's Suburban Revolution: The American Dream Façade"
3:20-3:35 pm Stacy Stice: "The Nature of Categorizing Those Who Do Not Have Categories"
3:40-3:55 pm Patricia Izbicki: "The Music and Social Impact of Elisabeth Jacquet de la Guerre"

3:55-4:10 Break

Women Today

4:10-4:30 pm Dani Berkowitz: "For Jewish Girls, Who Have Considered Kvetching When the Rainbow Was Enough"
4:35-5:00 pm Maria Cristina Leite: "Gumbo Gallery: The Art of Sonja Griffin Evans"
5:00-6:00 pm Closing Reception and Recipients of Outstanding Presentation Awards

Abstracts

1. "Dog Days Are Over"

Rebecca Cleary and Lauren Cleary
Department of English and Department of Communication
Arts/Art

We were inspired by Florence + the Machine's "Dog Days Are Over," as the song demonstrates the tenacity and fervor that are so imperative to feminist movements, an element that is quite apparent in the song's music video. Each verse, for us, embodies a new movement of feminism, as the first chorus begins, "with every bubble she sank with her drink, and washed it away down the kitchen sink". By the end of the song, the speaker concludes "run fast for your mother, fast for your father, run for your children, for your sisters and brothers". We find these lyrics an inspiring call to action for feminists today and we choreographed this piece to motivate those committed to the cause through this dance. Our dance is in the form of a lyrical contemporary duet.

2. Does Women's Partisanship Really Affect Politics?

Natalie Kortus
Department of Diversity Studies

This essay addresses the gender-gap, gendered institutions, and partisanship of woman, and if it really affects policies with the lack of women's representation. The essay will explore historically how far women have come and how much they have really influenced change. Women in Congress are a main focus, because they regard themselves as stationary in their careers once they are elected; therefore, the women are willing to be more liberal. Through analyzing many studies women tend to consistently be more liberal than men, but collectively there are many variations within political groups of women. Comparing women to men in politics has a wide gap, but decreases within parties and within geographical regions. There are many theories about why women vote certain ways and why the gender-gap exists. By exploring these theories it gives a better understanding of where women are coming from and their ideologies. Women were excluded until recently from political surveys, since about the 1980s studies have shown the difference in voting trends between men and women. Many women believe

it's an issue of equity to have more women representation, leading to more feminized in policies and politics. By differentiating between women and men partisanship and politics it helps determine if women really are influencing politics. Since women are the majority of the population, yet still treated like a minority it's interesting how little women get into higher offices and how few women actually serve on the congress and senate. How women affiliate with a certain political party also determines a lot about their voting patterns.

I hypothesize that women even though tend to vote more liberal and take up a woman's agenda there is not enough representation for women to affect policies. Women do not have a substantial amount of representation and even though less than 100 years ago women couldn't even vote they still haven't gained enough political power to shift to a woman's agenda. In recent elections they have had a great increase in women's representation, but haven't the same increase in political processes and policies. Many feminist and other scholars believe with a shift in women's representation will lead to an overall change in politics.

3. Social and economic correlates of rates of abortion in the Russian Federation and the United States

K'yone Zenobia Johnson
Department of Health, Leisure & Exercise

Social and economic conditions can affect health status in a many different ways. Depending on the quantity and quality of these conditions improvement or deterioration in health status can occur. In the 1990s middle-class Russians were pushed below the poverty level. American men and women have faced these same challenges albeit more recently in the 2000s. The present study explored the relationship between social and economic variables and several indices of abortion. The variables were divorce, rates of contraceptive prevalence, number of OB/GYNs, health expenditure per capita, female unemployment, and gross domestic product per capita. The indices of abortion were the numbers, rates and ratios of abortion for women aged 15-49 years and for women of all ages, respectively, in both countries for each year from

1990 to 2009. Statistical techniques included partial correlational analysis and multiple linear regressions. The study controlled for any effects of gross domestic product per capita on possible associations among variables. Despite vast differences in the countries regarding abortion, as a measure of female health status, both stand to benefit from improvements in the social, economic, and health care systems. Implications for future research included increasing the availability of contraceptives, especially for women, in both countries.

4. “My Fate Depends on Having Sons”: Male Castration and Female Objectification in The Castle of Otranto

Rebecca Raley

Department of English and World Languages

In Horace Walpole’s novel *The Castle of Otranto*, female characters are virtuous, vulnerable, and completely dependent on male authority figures. Significantly, *Otranto* was written during the Industrial Revolution, a time of rapid social change, when it was feared the patriarchal basis of society was being undermined. This essay explores the masculine text’s unconscious fear of castration in a culture dependent on male lineage, as well as the fear of female self-sufficiency in a rapidly changing society. *Otranto* reacts to these fears by idealizing and objectifying women, and killing Matilda for embodying female autonomy. Ultimately, however, the patriarchal system cripples itself and demonstrates that it is fundamentally unsound.

5. “Blueberry Hill” Monologue

Christine House. Shannon Hemmings

Department of Student Transitions Programs

This piece comes from the book *A Memory, a Monologue, a Rant, and a Prayer* by Christine House. This monologue is about a young woman who goes out to have an innocent fun night out and is almost gang raped. She tells her amazing, heart wrenching story of the day when she thought her life was going to end and how she fought to the death to keep it. This piece is a true inspiration to women all around the world. It shares a story of a woman’s strength in a very desperate time in her life. This piece can really connect to people that have been in similar situations, people that think that they have caused a horrible event to happen, and that they deserve the consequences. Also, this piece reminds both men and women alike, that just one person making a stand for the right thing can drastically change someone’s life for the better. *Blueberry Hill* is a beautiful piece of work that I would be honored to perform at the Women’s Studies Conference if given the opportunity.

6. “The Tragedy of Romeo and Juliet: Where Marriages Fail and the Decadence of Men Flourishes.”

Ashley Rawlinson

Department of English

This essay proposes an analysis of William Shakespeare’s *The Tragedy of Romeo and Juliet* by using key terms such as “masculine honor” and “competition,” acknowledging that the male Shakespearian characters are projecting one’s masculinity onto both male and female genders. Masculine honor is viewed as an honor code that men of all economic statuses must follow to be perceived as masculine by their peers. As a direct result to masculine honor, constant competition is constructed between the men in multiple forms, namely the struggle to be portrayed as masculine, which primarily consists of violent tendencies. In the play, men’s relationships are derived from violence (toward both male and female characters) that enables men to view sexual bonds with women as a form of threat because these acts take away from the homosocial bonds men experience with one another. Violent tendencies of male aggression focus on both the male characters and male actors of the Shakespearian play, as well as the lack of female actors. Romeo is exercising vengeance on Juliet in both the character’s female and male form. The female form is the character that Shakespeare uses as the character in the play, while the male form is the actor who is portraying Juliet on stage. However, since there is no female virtue on stage because there are no women on the stage, a male actor cannot imitate feminine virtue. Therefore, a power struggle emerges between the men portraying Romeo and Juliet, presenting Juliet as a victim of male-on-male violence through Romeo’s domination over Juliet as the male actor. However, Romeo, as a male character, and Juliet, as a female character, are involved in a heterosexual relationship, which is being compared to the homosocial bonds Romeo shares with his male peers. Since Shakespeare’s Verona is a masculine world, Romeo’s honor trumps the erotic love he shares with Juliet because masculine honor rests on the homosocial relationships between men. In leaving the heterosexual relationship Romeo shares with Juliet, he proves himself masculine, and thus achieves masculine honor, which is consistent to women becoming the victim in the masculine honor discourse.

7. “Great Hera!”: War, Politics, and Wonder Woman

Rebecca Namniek

Department of English

This analysis will establish how issues of gender and nationalism are embodied in the legendary comic Wonder Woman as a result of the women’s liberation movement during the latter half of the twentieth century. Wonder Woman, who is portrayed as an icon of American feminism, depicts a rare kind of heroism that arose during American wartime. By examining instances of engendered nationalism during wartime and its effect on Wonder Woman physically and sexually, I contend that Wonder Woman serves to excite feminism by channeling old energies into new controversies, but is consistently met with overwhelming antagonism from mass culture. Similar to the reception of anti-war efforts, feminism was largely patronized by American men whose manhood was routinely challenged by the presence of a gender-amalgamated superhero. Wonder Woman’s unsurpassable strength and tantalizing beauty threatened hegemonic masculinity and the gender hierarchy altogether. Many women, too, felt threatened by what Wonder Woman symbolized, which was, among other things, a disruption in the home that effected, in one way or another, the lives of all members of the nuclear family as well as society at large. Although limited to the scope of the latter half of the Golden Age and well into the Bronze Age, this analysis will reveal how Wonder Woman is still dictated by a predominately male authorship whose goal is to preserve and reaffirm American masculinity while simultaneously subordinating women and feminism entirely. In summation, this analysis explores the misogynistic politics embedded deep within the pages of Wonder Woman and unearths the unequivocal relationship between Wonder Woman and feminism.

Second-wave feminism was a product of America’s political divide on issues concerning the Vietnam War, regulations on birth control, bans on abortion, and the social deprecation of the new career woman as all were matters of contention for feminists that served as debate between the liberal left and the conservative right.

8. “Maybelline”

Zachary Giberson

Department of Art

“Maybelline” takes the work of an advertisement and subverts its intent by highlighting the sexual nature of original work. Featured in several editions of the magazine *Better Homes and Gardens*, this advertisement for Maybelline brand make-up features a woman in ecstasy. I used a scanner to manipulate and distort the image,

highlighting the sexual objects, namely the parted lips and half-closed eyes, and touched the reinterpreted piece up in Photoshop. It is up to the viewer of the remade piece to determine the meaning, as either condemnation or celebration of the sexualization of women for financial gain. The fractured nature of my reinterpretation illustrates the difficult debates that advertisements for images that sexualize women are met with. The object of the advertisement is to sell make-up to women, and the fact that this image appears in a magazine geared towards those same women exaggerates the sexual nature of the piece. Have women finally reclaimed their sexuality from being defined by men, and is this advertisement proof? Has make-up been reclaimed from heterosexual men’s fantasies about what a “true,” “proper,” and “desirable” woman should look like? Should the sexualization of women in advertisements be celebrated as a progressive move in a society that is largely anti-woman? Is sexualization with the end result of financial gain on the same level as sexualization through self-expression? Or is the opposite true, and is this advertisement intended to arouse male readers of *Better Homes and Gardens* with a product that is intended for women?

9. “Rising”, “Predetermined”, & “It Wasn’t Mine”

Morgan Arnett.

Department of Art

The first piece “Rising” is a photographic transfer print that illustrates the idea of growth and the evolution of women. I interpret it as an emergence of women from the backdrop of society, the “rising” of feminism and a continuous flow of transformation inspired by women through time.

My second work “Predetermined” is a pen and ink work was inspired by cellular forms and encapsulates the idea that what is expected and what is appropriate for a person of female gender is predetermined, and from our earliest development we are expected to dress, behave, and appear according to our gender identity.

My last piece “It Wasn’t Mine” is a painting of abstracted breasts, addressing the preoccupation of sexual features in the media, and the emphasis many place on the physical features of a woman. I also consider it homage to early female essentialist artists, and more specifically to the revolutionary instillation of the 1970s, “*Woman House*”, conceived by female artists such as Judy Chicago and Miriam Shapiro.

10. This Princess in NOT in Another Castle: Feminism's Struggle for Survival within Geek Culture

Melissa Williams

Department of English

“Hey! Quasi-Pretty-NOT-Hot-Girl, you are more pathetic than the REAL Nerds, who YOU secretly think are REALLY PATHETIC. But we are onto you. Some of us are aware that you are ever so average on an everyday basis. But you have a couple of things going your way. You are willing to become almost completely Naked in public, and yer either skinny...or you have Big Boobies,” ranted Tony Harris, a comic book illustrator and nominee for 5 Eisner Awards, on his Facebook page in November of 2012. Most people responded to his misogynistic description of women in costume at comic book conventions with outrage and disgust but almost just as many men rose up to congratulate Harris on his tirade, telling their own stories of falling prey to the “fake geek girl.”

Geek, or nerd (the names have become almost interchangeable), culture has become something of a novelty in recent years with the popularity of comic book franchise movies and the growing social fixation on the development of science and technology. This alternative culture was formed as a safe haven for those dubbed geek, nerd, (once more insulting titles), loser, basement dweller, who just wanted to play tabletop games, read comic books, study hard, work on computers, or do any sort of activity not wholly accepted within societal norms without being threatened or teased. So it becomes problematic when an entire group formed because of its members' exclusion itself begins to exclude. This same culture is rich in fiction that explores new, fantastic worlds, time periods, and social structures in which literally anything can happen. Still the authors and consumers decide to perpetuate works that not only exclude but also insult an entire gender, such as the busty comic book heroine or the easily bedded sci-fi alien girl. This problem must be addressed and eradicated. Many women geeks and nerds have sought to correct these problems and are beginning to develop a voice in the geek community. Comments such as those that came from Tony Harris and his supporters illustrate that the work is far from over but there does exist passionate, geeky women feminists who have something to say about it. As they speak, we can begin to locate the source of such behavior as well as formulate solutions that allow geek women to engage in any and all nerdy activities comfortably, without sacrificing their passion for this culture.

11. The Differential Experience of Childhood Maltreatment Between Genders: Is It Really Different?

Jessica Thurmond and Raquita Peasant

Department of Psychology

It has been proposed that during childhood there appear to be considerable differences in anxiety and social anxiety between genders (Erath, Flanagan & Bierman, 2007; McLean & Anderson, 2009). Research suggests that girls are more likely than boys to have a current or lifetime diagnosis of an anxiety disorder (Weinstock, 1999). These gender differences have also emerged in previous research on the effects of childhood trauma. In one instance, researchers found that women were more likely to internalize traumatic experiences than were men, thus causing higher instances of anxiety and depression in women (Thompson, Kingree, & Desai, 2004). Other research has found few gender differences in outcomes following physical or sexual abuse. For example Bley (1996) found no gender variation in terms of levels of coping abilities, self-esteem, and social adjustment following sexual abuse. Another study found men and women displayed similar rates of behavioral and social problems following childhood abuse (Dube, Anda, Whitfield, Brown, Felitti, Dong, & Giles, 2005). Given the contradicting body of existing research the current study set out to examine whether differences exist between genders that were and were not exposed to childhood maltreatment (e.g., physical and sexual abuse). Based on the findings of Larsen, Sandberg, Harper & Bean (2011) that found similar rates of social impairment between genders following child abuse, we hypothesized that (H1) there would be no significant difference between the genders in either trauma symptomology or social anxiety in those not subjected to childhood maltreatment; and (H2) these non-significant results between the genders would hold constant in those who were subjected to childhood maltreatment. Self-report questionnaires were administered to 440 undergraduate students (87 men, 353 women, M= 21.96 years, SD= 6.56) through anonymous online surveys. From this set a random sample was taken of 70 males and 70 females, each comprised of 35 participants with and without a history of childhood maltreatment. Participants were recruited voluntarily through a psychology research pool within the department along with other university organizations and departments. Measures included a demographic questionnaire, the Trauma Symptom Checklist-40 (TSC-40), the Liebowitz Social Anxiety Scale and the Sexual and Physical Abuse Questionnaire (SPAQ). This investigation employed two, one-way, between-subjects analysis of variance (ANOVA) with four categorical independent

variables (males with and without abuse, females with and without abuse) to assess trauma symptomology and social anxiety. Analysis confirmed our hypotheses with no significant differences at the $p < .05$ level between males and females regardless of any or no history of childhood maltreatment. These findings suggest that the emphasis that is often placed on differences between the sexes maybe resulting in a lack of attention to the similarities that exist. This overgeneralization could have clinical implications on the way we treat and assess males and females subjected to childhood maltreatment and could encourage social stigma affiliated with either sex in relation to the perceived outcomes. Overall the results indicate the need for further research on the ways in which males and females experience childhood trauma.

12. 1960s Suburban Revolution: The American Dream Façade

Devin M. Blackmarr, M.Ed.

Department of Diversity Studies

The suburbs were more than just nuclear families living in newly built homes in newly developed neighborhoods with white picket fences and a golden retriever; they were a way of life, a middle and upper class American Dream. In the late 1940s when World War II was coming to an end, the shift of family life grew ever-increasingly important, and those who were not already married before the war soon found themselves looking for love (Miller, 1996). The notoriety of the nuclear family lifestyle came as a need for stability and comfort. The men that had been at war missed mama's home cooking and the women who might have tried working or college found themselves only wanting to take care of a husband and children (Friedan, 2001). The urgency of the suburbs grew with the surge of this coveted lifestyle. Soon suburbs were popping up in the outskirts of bustling cities from coast to coast. The so-called American Dream, which included suburbia, was not always what it seemed. There were many factors behind the scenes that played crucial roles in how these suburbs were promoted and established. The men were gone at war, while the women took over the husbands' duties at home and worked jobs that some of the men had left behind unmanned (Friedan, 2001). Popular television shows captured audiences in the late fifties and early sixties which idolized the father and patronized the mother, such as “Father Knows Best” (Miller, 1996, p. 19). Also, women's lives in the suburbs were masked by anti-depression and anti-anxiety drugs (Herzberg, 2009; Miller). These issues lead to a suburban lifestyle that, for many women, turned in to a spiral whirlwind that put a damper on American life.

13. The Nature of Categorizing Those Who Do Not Have Categories

Stacy Stice

Department of Diversity Studies

Gender categories in Western societies tend to be exclusive and prevent people from freely choosing their own gender. This pattern continues despite research that has proven gender to be an abstract concept that has been created by the society in which it exists. For example, there are many societies that have three or four gender categories whereas Western societies have two main categories in place and one that is hardly acknowledged. This research project explores reasons why Western societies continue to practice rigid guidelines for their gender categories. However, there have been slight changes in gender restrictions for Western gender categories. For instance, there is now a category for people known as transpeople who change their gender, or sex, identities. These changes are still fairly recent and are not readily recognized by most of society. There are many activist groups calling for change, but there is a lack of consensus about what type of change should take place. Some groups want more flexibility in the existing categories of gender; others want new categories to be created; and some call for a complete deconstruction of gender. There are also activist groups in other parts of the world who want change within their own societies, and it is beneficial to compare and contrast their wants and needs with those of Western society. Research for this project is being conducted through analyzing books and scholarly articles of other people's research. It is normal for people to categorize and define existing differences. However, in order for society to categorize people, more categories need to be created to accommodate all people instead of ignoring those who challenge the existing structure of gender categories.

14. The Music and Social Impact of Elisabeth Jacquet de la Guerre

Patricia Izbicki

Department of Music

The role of women in various periods of music has been limited and under recognized, especially the role of women in the Baroque period of music (1600-1750). However, Elisabeth Jacquet de la Guerre, a significant and influential harpsichordist and composer of the Baroque period, was one of the first women in music history to be fully recognized for her achievements in a field dominated by her male-counterparts. The study will explore Jacquet de la Guerre's career, the technique of her compositions, and the influence of her works in French society as well as the

musical world. The research will also explore the social issues and challenges Jacquet de la Guerre faced as a female musician and composer during the late seventeenth and eighteenth century, as well as how these challenges and issues influenced her career and personal life. The stylistic techniques of Jacquet de la Guerre's compositions will be shown through a performance of a few of her works on harpsichord. The research on Jacquet de la Guerre will also be based on findings in "The Instrumental Music of Elizabeth-Claude Jacquet de la Guerre" by Carol Henry Bates and An Introduction to Elisabeth-Claude Jacquet de la Guerre by Edith Borroff. The implications of the research illustrate Jacquet de la Guerre's successful yet challenging career as well as her influence on the music of the French society in the Baroque period. Her impact on the recognition of women as musicians in a field dominated by men deems to be her most significant achievement in the Baroque era. Jacquet de la Guerre not only paved the way for female musicians in the Baroque era and future eras, but also for women in many types of careers to be recognized and respected in societies all around the world.

15. "For Jewish Girls, Who Have Considered Kvetching When the Rainbow Was Enough."

Dani Berkowitz

Department of Women's Studies

This spin on Ntozake Shangay's "For Colored Girls" is a staging of three stories that describe three stories of women who experience coming out of the closet to their respective denominative community. With humor, real life issues, and an episodic style, the effort to "edutain" the audience will have them walk away with a broader view of identifying with the LGBTQ community within a faith-based congregation.

My performance will encompass three women, each from a different denomination of Judaism: Orthodox, Conservative, and Reform. Each woman is a different age and holds a different role in their own practice while all connecting through a central trial: "How do I do it?" I plan on giving a five-minute monologue per character and including a monologue about queer Jews. If I could categorize this performance, I would classify it as a spoken word poem/short play.

16. Gumbo Gallery: The Art of Sonja Griffin Evans

Maria Cristina Leite

Department of Diversity Studies

The ethnography Gumbo Gallery: The Art of Sonja Griffin Evans explored the work of artist Sonja Griffin Evans. Originally from Beaufort, South Carolina, Sonja Griffin Evans currently lives in Pensacola, Florida. An active member of Belmont DeVilliers Community, Sonja believes historical and cultural heritage should be preserved through the arts. Data collected from series of interviews and observations conducted at Gumbo Gallery, which is the art gallery owed by the artist, were analyzed and compiled into categories. The main purpose of the study was to answer the question: How do history, culture, and faith influence Sonja Griffin Evans art? Three of Sonja's most significant collections were scrutinized during this investigation - Forgotten Communities, Spirit of New Orleans, and Inspirational Doors. Final considerations showed that, even though each collection had a specific aspect that clearly influenced each piece, history, culture, and faith were, in fact, interwoven themes in Sonja's work.

Welcome to STEM!



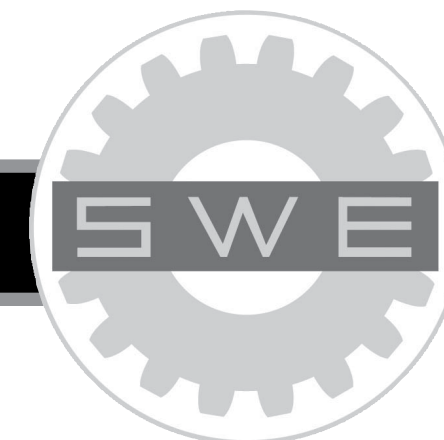
The Society of Women Engineers (SWE) is a global organization established in 1950. The mission of SWE is to stimulate women to achieve full potential in careers as engineers and leaders, expand the image of the engineering profession as a positive force in improving the quality of life, and demonstrate the value of diversity. The Northwest Florida professional section of SWE and the UWF collegiate section of SWE engage in various outreach activities and networking events throughout the year in support of this mission.

With additional sponsorship from the UWF School of Science and Engineering, the Northwest Florida professional section of SWE and the UWF collegiate section of SWE under the leadership of UWF section President Marienel Finkley, a senior Electrical Engineering student, have collaborated to present the 2013 Women in STEM Symposium: Discovering the Engineer Within. This symposium will provide an opportunity for young girls, collegiate members, and professionals in academia and the community to share their experiences and to provide mentorship to girls, collegiate members, and young professionals. We hope that you leave with a renewed commitment to actively supporting the development of our future women in STEM.

Laura J. White, Ph.D.

President, Northwest Florida Society of Women Engineers
Associate Professor, UWF Department of Computer Science

Abstracts



STEM Schedule of Events

08:30 – 9:00 a.m.	Check in -- handouts, t-shirts, and mentoring information
9:00 – 9:10 a.m.	Welcome by the Director of the School of Science and Engineering (SSE)
9:10 – 9:30 a.m.	<i>Keynote Address Biodiversity in India</i> by Lindsay Pharis
9:30 – 9:40 a.m.	Break
9:40 – 10:25 a.m.	Breakout Sessions 1
10:25 - 10:35 a.m.	Break
10:35 – 11:20 a.m.	Breakout Sessions 2
11:20 – 12:20 p.m.	Lunch – seating by mentoring groups Women in Engineering Scholarship Award Presentation
12:30 – 1:00 p.m.	SSE Holodeck demonstration for all attendees

STEM Schedule of Events

Breakout Sessions 1

Conference Room A

Collegiate and Pre-collegiate students
A day in the life of a university engineering student
Hands-on engineering activity

Conference Center Lounge

Faculty, Staff, and Professionals
Professional trends and needs

Breakout Sessions 2

Conference Room A

Collegiate Students and Professionals
A day in the life of a new professional engineer

Conference Center Lounge

Faculty, Staff and Pre-collegiate students
Preparing for college/university life

Keynote Address: *Biodiversity in India*

Airbus sent a team of 16 employees from around the world to build biogas domes in southern India for a rural community. The domes use cow manure and water and produce a methane gas which will power a small stove for cooking. The domes produce approximately 4 hours of gas a day, which is enough for each family to have breakfast, lunch, dinner, and hot water for bathing. Also, the families do not have to gather firewood to start a fire, which saves the women time and helps conserve the depleting forests.

Our keynote speaker, Lindsay Pharis, is originally from Pensacola, and graduated from Washington High School in 2004. She also attended Pensacola Beach Elementary, Cordova Park Elementary, and East Hill Christian Middle School. Lindsay graduated from Auburn University with a Bachelor of Aerospace Engineering in 2008. She has worked at Airbus in Mobile since July 2008, and has had the opportunity to work for Airbus in Germany, France, and India in the past 5 years. From 2009-2012 she studied online with The University of Alabama and earned a Master of Science degree in Aerospace Engineering.

Student Symposium Schedule

- 1:00 pm Opening Remarks by Provost Saunders – Field House
- 1:00 – 5:00 pm Public Viewing in Field House
Performances and Oral Presentations in Argo Athletic Club
- 1:30 pm Argo Athletic Club
Music
Robert Schumann's Illness and Its Effect on His Music
by Patricia Izbicki
- 2:00 pm Argo Athletic Club
Seeking Redemption: The Clergy Project applied to
Kenneth Burke's Terms of Order
by David Feliciano
- 5:00 pm Awards Ceremony- Field House

Welcome Scholars!

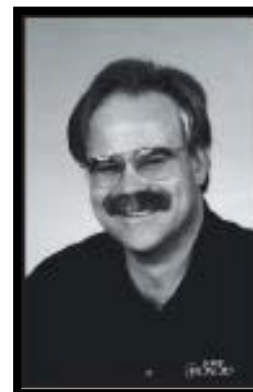
Welcome to UWF's Student Scholars Symposium! I want to congratulate those students participating in this year's program which highlights the best in scholarly and creative works produced through collaboration between students and faculty.

Highlighted in the program are those students whose projects received support from the Office of Undergraduate Research, including many who were able to present their research at regional and national conferences this year. Join me in celebrating the wonderful achievements of our students!

Pam Vaughan. Ph.D
Director, Office of Undergraduate Research



On behalf of the University Honors Program, I'd like to welcome each and everyone of you to the UWF Student Scholars Symposium! The Honors Program has a long and deep history of supporting undergraduate research at The University of West Florida, and this Symposium is just one way we have of celebrating the great work of our wonderful students!



I can't tell you how proud I am of the cutting edge thought and ability that an exhibition like this shows; we are definitely living up to our promise to bring out the very, very best in our students. I hope you have an enjoyable and stimulating time!

Greg Lanier. Ph.D
Director of Honors

Summer Research Academy Scholars

Joseph Brice

Chemistry

The focus of the research in which I have participated is the calibration of a reflectron time-of-flight mass spectrometer (RTOF-MS) for laser desorption/ionization mass spectrometry(LDI-MS). I am grateful for the support the Office of Undergraduate Research. Participating in Summer Academy gave me the opportunity to learn skills valued when applying to graduate school, such as rebuilding vacuum pumps and learning to program in National Instruments LabVIEW. As a result of the summer research our instrument is maintaining vacuum between 2.5×10^{-7} Torr and 6.0×10^{-8} Torr. These pressures are more than sufficient for obtaining mass spectra. We've also assimilated the LabVIEW program to collect the signal necessary for calibrating the instrument. Future research will involve the use of the mass spectrometer to better understand the role sample preparation and surface morphology will have on the ionization efficiency of the laser desorption/ionization process.



Joseph presented this research in April 2013 at the 245th National American Chemical Society Meeting and Exposition. He intends to pursue a Ph.D. in chemistry, specializing in physical chemistry and has been accepted to the University of Utah and The University of Georgia to begin in Fall 2013.

Donald Cooper

Elementary Education



My project focused on teaching methods and procedures that motivated and built student confidence in students identified as having weak math skills. Instead of using traditional means, we relied on student interest in games and competition to increase these skills. Students were given pre-tests at their current grade level and previous grade levels. Our major finding was that with some easy changes to the curriculum delivery, you can achieve success in even the lowest achieving students. The students all showed an increase in their performance of mathematics while increasing their confidence. This helps me in my pursuit to teach because not all the techniques were book driven. By using games, the students were not as apprehensive about their skills and they drew on their competitive spirit to play against each other.

I am currently perfecting my skills at Campfire (an After school care organization at Longleaf). Here I get to tutor and assist students in reading, math and homework in general. It gives me an idea of the skills that will be needed in the classroom from behavior management to communication and team building with the parents. I continue to use some of the games and approaches that I had in the research project to assist the students in reaching their maximum potential.

Patricia Izbicki

Chemistry/Music



Medicine and music are related to one another because both promote the science and art of healing. What interests me most is the mechanism by which this healing happens. The 2012 OUR Summer Research Academy provided me with a unique opportunity to further explore the relationship between medicine and music. One of the most compelling composers of the nineteenth-century, Robert Schumann was known for exhibiting beauty, artistry, and passion in his music. However, Schumann was troubled by medical conditions that impacted his physical and mental well-being. My research explored Robert Schumann's physical and mental afflictions and how they shaped his music and life.

Since the summer, I have been fortunate to have the opportunity to present this research at the 2013 Hawaii University International Conference on Arts and Humanities as well as the 2013 Florida Collegiate Honors Council Conference. My future goals involve going onto an M.D/Ph.D. program. As both a physician and researcher, I would be able to combine my passion and interest of impacting the lives of people through healing as well as my passion and interest of contributing knowledge to the field of medical research.

Thomas Jeffers

Anthropology and Archaeology

During my experience with the 2012 O.U.R. summer research academy. I researched the dietary and biomass potential of shell deposits excavated during the 2011 Anthropology departments Campus Survey archaeological field school. I was able to show that there was an increase in biomass from proper identification of the species present. This opportunity has renewed my fervor for archaeology and has led me to want to further my education and experience by attending a graduate program in anthropological archaeology.





Ashley Lambert
Pre-professional Biology

Currently I am working on the neoglycosylation of 3-hydroxydecalin rather than phytosphingosine for my honors thesis. We have had some success in our synthesis but our research has not yet yielded any data for our database. I hope to have it completed for the Southeast Regional Honors Conference as well as the American Chemical Society conference in April. This summer I will be training to become an Emergency Medical Technician as well as continuing my education at the University of West Florida. I plan to begin medical school in the fall.



Courtney Richards
Environmental Science

LIDAR (Light Detection and Ranging) is an optical remote sensing technology that can measure the distance to, as well as other properties of a target, by illuminating the target with pulses from a laser. Using data collected from the NOAA Coastal Service Data, I conducted a canopy biomass and tree height analysis with ArcMap 10. The canopy biomass analysis used the UWF campus as a study area to determine the affects of human development on the surrounding wetlands. This project will be finalized after the completion of an internship with the NASA Develop program.

Thapelo Ncube
Mathematics

Since traffic accidents are a major cause of deaths in the United States especially among adolescents, my professor and I researched which particular factors increased the risk of driving without a seatbelt. We used data from the Youth Behavioral Risk Survey from 2009 with a total of 16,345 participants. The variables of interest included: grade level of the adolescent, alcohol use, illicit drug use, socio-demographic, and driving with several teenage passengers.

The Office of Undergraduate Research's Summer Research Academy was an opportunity that I will forever be grateful to have been chosen to participate in. I was able to learn valuable research skills while working on my project that used statistical analysis to find factors that influenced seatbelt use- Thanks Dr. Vaughan! I plan on graduating in the Spring of 2014 and attending graduate school.



Carla Staton
Chemistry and Psychology

My research focuses on the attachment of proteins to the hyperbranched polymer polyglycidol. Polyglycidol is biocompatible so the attachment of proteins has medical applications. Participating in the OUR Summer Research Academy was an incredible way to learn about the research process and graduate school. Currently I am working on creating a method for attaching the twenty standard amino acids to polyglycidol. I will be presenting my research at the American Chemical Society National Meeting in New Orleans, LA.



OUR Summer Research Academy

Field House Map

41	42	43	44	45
36	37	38	39	40
31	32	33	34	35
26	27	28	29	30
21	22	23	24	25
16	17	18	19	20
11	12	13	14	15
6	7	8	9	10
1	2	3	4	5

Podium

Field House Map of Abstracts

70	71	72	73	74	75
64	65	66	67	68	69
58	59	60	61	62	63
52	53	54	55	56	57
46	47	48	49	50	51

Registration Tables

Free Food in Registration Area

116	117	118	119	120
111	112	113	114	115
106	107	108	109	110
101	102	103	104	105
96	97	98	99	100
91	92	93	94	95
86	87	88	89	90
81	82	83	84	85
76	77	78	79	80

Department Abbreviation Guide

- ACT Department of Accounting and Finance
- ANT Department of Anthropology
- BY Department of Biology
- CHM Department of Chemistry
- CJS Department of Criminal Justice/Legal Studies
- COM Department of Communication Arts
- CS Department of Computer Science
- ECP Department of Electrical & Computer Engineering
- ENG Department of English
- EVR Department of Environmental Science
- GOV Department of Government
- HLP Department of Health Leisure & Exercise
- IDS Department of Interdisciplinary Studies
- MAT Department of Mathematics
- ME Department of Marketing & Economics
- MM Department of Management/ MIS
- MUS Department of Music
- PR Department of Philosophy
- PHY Department of Physics
- PSY Department of Psychology
- TED Department of Teacher Education

1. ACT *Ecommerce in the Banking Industry*
Calvin Crenshaw, June Wei
2. ANT *A Preliminary Palynological Assessment of Thompson's Landing Archaeological Site (8ES950)*
Morgan F. Smith, John Bratten
3. ANT *Allometric Analysis of Prehistoric Shell Middens in the Escambia River Estuary*
Thomas Jeffers, Ramie Gougeon
OUR Funded
4. ANT *Analysis of Waterlogged Wood Conservation Techniques*
Shandra Allen, John Bratten
Honors Thesis
5. ANT *Conservation and Coins: A Look at Spanish Currency in the New World*
Stephanie Dominici, Jayne Godfrey, John Bratten
6. BY *Bacterioplankton Community Response to UV Radiation in the Northeastern Gulf of Mexico*
Josette Hutcheson, Katelyn Houghton, Christian Riesenfeld, Joseph Moss, Richard Snyder,
Wade Jeffery, Christian Riesenfeld
7. BY *Ciliate protist community structure in the plankton of the northeastern Gulf of Mexico determined
by particle analysis and molecular diagnostics.*
Preston Shisgal, Christian Riesenfeld, Joe Moss, Richard Snyder, Wade Jeffery
8. BY *Comparing the effects of temperature on metabolic rates in water, sediment, and air for the coquina
clam, Donax variabilis*
Tiffany Nay, Jane Caffrey
OUR Funded
9. BY *Determining the Methodology of Gene Testing of the MSX1 Gene*
Cierra Sapp, Hui-Min Chung
OUR Funded
Honors Thesis
10. BY *Development of a Propidium Monoazide-Polymerase Chain Reaction (PMA-PCR) assay for the
fingerprinting of viable benthic microalgae in marine sediments.*
Chelsea McCurry, Richard Snyder
Honors Thesis
11. BY *Creating pen-2 mutant in Drosophila melanogaster by transposable element excision technique*
Matthew Nalley, Hui-Min Chung
OUR Funded
12. BY *Galápagos Populations: Analyzing Population Research to Study Weaknesses in Conservation
Efforts of Targeted Species*
Anna Garcia, Richard Snyder
Honors Thesis
13. BY *Influence of a gypsum spill on sediment phosphorus concentrations in Grand Bay, Mississippi*
Cheyenne Hunt-Alderson, Jane Caffrey
14. BY *Nitrification and importance of ammonia oxidizing archea and ammonia oxidizing bacteria in
seagrass beds of Pensacola, FL*
Danielle Pfeiffer, Jane Caffrey
OUR Funded
15. BY *Petroleum Hydrocarbon-Degrading Bacteria Enriched from Deep-Sea Sediments Associated
with the Deepwater Horizon Gulf of Mexico Spill.*
Bryan Davis, Joe Eugene Lepo, Wade H. Jeffrey
16. BY *Spatial and Temporal Variations in the Community Structure of Marine Archaea: The Gulf of
Mexico*
Sarah Tominack, Christian Riesenfeld, Joseph Moss, Richard Snyder
17. BY *Temporal and spatial responses in bacterioplankton community structure and function after
exposure to oil and dispersants in the Northeastern Gulf of Mexico*
Katelyn Houghton, Josette Hutcheson, Christian Riesenfeld, Joseph Moss, Richard Snyder,
Wade Jeffrey
18. CHM *A Physical Chemistry Laboratory Experiment: Measuring the Speed of Sound using Nitrocellulose*
Brandon Burnette, Jacob Stepherson, Karl Reyes, Karen S. Molek
OUR Funded
19. CHM *Calibrating a Matrix-Assisted Laser Desorption/Ionization Reflectron Time-of-Flight Mass
Spectrometer by Tracking Ion Potentials through the Mass Spectrometer*
Joseph T. Brice, Georgia C. Boless, Brandon A. Burnette, Karen S. Molek
OUR Funded
20. CHM *Cationic ring-opening polymerization of glycidol in the presence of emulsifiers*
Carla M. Staton, Randy L. Hightower, Louis A. Searcy, A. Timothy Royappa
OUR Funded
21. CHM *Effects of Salinity and Organic Matter Content on Triclosan Photo-degradation*
Janae Baptiste, Pamela Vaughan
Honors Thesis
22. CHM *Effects of Silane Structure on Zinc Oxide Quantum Dot Synthesis*
Lena Ibrahim, Michael Smith, Samuel Bynum, Karen Molek, Pamela Vaughan
OUR Funded
23. CHM *Humic Acid and Salinity Effects on PAH Photodegradation with Variable Light Exposure*
Ryan Pichulo, Dane Brankle, Jini Curry, Pamela Vaughan
24. CHM *Interesting New Chemistry of Pyrrole b-Amides*
Alex Fisch, Eric Randolph, Michael T Huggins
OUR Funded
25. CHM *Manganese Oxide Nanopowder Study: Synthesis, Characterization and Surface Assisted Laser
Desorption/Ionization*
Georgia Boles, Karen Molek
OUR Funded
26. CHM *NMR study of neoglycosides using 3-(N-methoxyamino)-decalin as a model*
Ashley Lambert, Patricia Izibicki, Randal Goff
OUR Funded
Honors Thesis
27. CHM *Photochemical Degradation and Bacterial Growth Response Crude Oil*
Gabrielle Daniel, Ryan Pichulo, Rose Atkinson, Jamie Trindell, Dane Brankle, Noel
Harris, Pamela Vaughan, Wade Jeffery
OUR Funded
28. CHM *Synthesis and characterization of titanium oxide nanopowders*
Christen K. Butterfield, Ryan M. Oberhausen, Gregory S. Kostelac, Karen S. Molek

29. CHM *Synthesis and Characterization Studies of Dipyrrinone-based Liquid Crystals*
Dylan Christiansen, Alex Vega, Michael T Huggins
OUR Funded
30. CHM *Synthesis of HIV-1 Capsid Protein Inhibitors*
Tia Jarvis, Joshua Brown, Rebecca Chandler, Michael T Huggins
OUR Funded
Honors Thesis
31. CHM *Toxicity Effects of Polycyclic Aromatic Hydrocarbons During Varied Sunlight and Temperature Exposure*
Rose Atkinson, Pamela Vaughan
Honors Thesis
32. COM *How Does Change In Leadership Affect Company Morale and Worker Productivity?*
Sashel Marquis-Wedderburn, Tressa M. Kelly
Honors Thesis
33. CJS *The Intersection of Law and Psychology: Effective Trial Strategies*
Dennis Foster Jr., Kimberly Tatum
34. CS *Android Game Development*
Ryan Baxter, Steven Case
35. CS *Material Safety Data Sheets on a Mobile Device*
Laura Hiltabrand, Laura J. White
36. CS *Natural Language Processing for Home Automation*
Douglas Stephen, Andrew Haynes, Eman El-Sheikh
37. CS *Smartphone Touch Gestures*
Mario Andhika, Steven Case
38. ECP *Design for Interior Temperature Regulation System for Stationary Vehicles*
Jon Kelly, Elias Argaw, Anthony Simpson, Bhuvaneswari Ramachandran
OUR Funded
39. ECP *Design of a Machine Learning System for Sign Language Recognition*
Michael Parlato, William Mackie, Mohamed Khabou
40. ECP *Design of a solar power assisted UAV*
Michael Benbow, Don Coleman, Justin Rumbach, Xiaojun Geng
OUR Funded
41. ECP *Design of a Vertical Axis Wind Turbine*
Brett Haymans, Derek Jeter, Christopher Ratliff, Bhuvaneswari Ramachandran
OUR Funded
42. ECP *Modern Drone Warfare: An Ethical Analysis*
Joshua Olson, Muhammad Rashid
OUR Funded
43. ECP *Unmanned Proximity Tracking Device*
Christopher Mason, Ryan Hope, Peter Rappold, Mohamed A. Khabou
OUR Funded
44. ENG *"Brown eyes, so brown as to be black": Attempts at Understanding "the Subaltern" in J.M. Coetzee's Waiting for the Barbarians*
Rebecca Cleary, David Baulch, Robin Blyn
Honors Thesis
45. ENG *Pulp Studies I: Pulp pedagogy: Active learning and Active Reading in the Pulps.*
Lauren Gibson, Rachel Johnson, Emily Sisler, David Earle
OUR Funded
46. EVR *An Assessment of Water Quality Trends in the Pensacola Bay System*
Claire Shipman, Matthew Schwartz
47. EVR *Assessing Environmental Impacts Through LiDAR Remote Sensing*
Courtney Richards, Zhiyong Hu:
OUR Funded
48. EVR *Assessing nutrient and physical environmental controls on Karenia brevis growth in laboratory cultures.*
Jennifer Houts, Matthew Schwartz
OUR Funded
49. EVR *Assessment of Water Quality and Chemistry within Carpenters Creek, an Urban Stream*
Heather Policicchio: Graduate Matthew Schwartz
SCAC Funded
50. EVR *Effects of Mob Grazing on Selected Soil Properties*
Sydney Poulos Haynes, Johan Liebens:
OUR Funded
51. EVR *Web GIS Campus Map Development*
Aaron Craker, Nathan McKinney
52. EVR *Effects of Mob Grazing on Selected Soil Properties*
Alexia Grier, Sydney Poulos Haynes, Johan Liebens
OUR Funded
53. EVR *Spatial and Temporal Variability of Karenia Brevis within the Choctawhatchee Bay System*
Claire Lacey, Matthew Schwartz
SCAC Funded
54. EVR *Spatial Simulation Modeling with SLEUTH*
Courtney Richards, Zhiyong Hu
55. GOV *Age-Based Differences in Recalling Political Messages*
Zack Campbell, Jenna Emery
OUR Funded
56. GOV *Causal Factors in the Global Financial Crisis of the 21st Century*
Matthew Leight, Michelle Williams
57. GOV *China's air pollution*
Megan Morrison, Jessica Hayden
58. GOV *Conscription with a Comma, Controversial Caveats Surrounding Israel's Defense Service Law*
Peter Goldsberry, Jessica Hayden
59. GOV *Correlation Between Poverty and Population Growth in America*
Rocio Tia, Jenna Emery
60. GOV *Costs and Benefits Analysis of the Arab Spring*
John Macdonell, Michelle Williams
61. GOV *Germany: The Immigration Conflict*
Andrew Bittner, Jessica Hayden

62. GOV *Global Water Scarcity; Political, Economic, and Geographic Implications*
Steven Salter, Leo Weeks
63. GOV *Iceland's fall in government*
Everett Ellis, Jessica Hayden
64. GOV *India Government and Public Health*
Quincie Doucet-Barron, Jessica Hayden
65. GOV *Influences on Peru's People and Government*
Taltha Motter, Jessica Hayden
66. GOV *On the Fence: U.S. Senate Voting on Immigration Issues*
Jennifer Reid, Jocelyn Evans
67. GOV *The Influence of Federal Research Subsidies on Advancements in Renewable Energy Technology*
David Hunter, Bill Tankersley
68. GOV *The Space in Our Hearts: How do local governments decide to memorialize tragedy*
Matthew Groff, Jenna Emery
69. GOV *The Women's Movement In Turkey*
Evelyn Van Derbeck, Jessica Hayden
70. GOV *Tourism and the Kenyan Economy*
Taylor Patton, Jessica Hayden
71. GOV *Women's Immigration Trends*
Nicole Clyatt, Jenna Emery, Michelle Williams
72. GOV *World Immigration Trends Effecting the US*
Danielle Mash, Michelle Williams
Honors Thesis
73. HLP *Effects of a Mentorship Program and Peer-Assisted Learning in an Limited Access Program*
Caitlin Arzaga, Christopher Dake
74. HLP *How to Avoid the Cold Shoulder: A Stage-Based Approach to Frozen Shoulder Syndrome*
Keeli Tritz, Scott Morrison
Honors Thesis
75. HLP *Measuring the Participant Spending of the Gulf Coast Half Marathon and its Economic Impact on the Pensacola Community*
James Sherrill, Anthony Beck, Chase Lambert, Shelbie Hurst, Charlie Song
OUR Funded
76. HLP *Measuring the Participants Spending of Double Bridge Run and Its Economic Impact to Pensacola Community*
Courtney Mincy, James Stephens, Kristina Hatmaker, Maggie McDonald, Jonathan Barrow, Julianne Gaubron, Matthew Rodriguez, Ryan Elliot, Charlie Song
OUR Funded
77. HLP *Measuring the Participants Spending of Wheel Chair Tennis and Its Economic Impact to Pensacola Community*
Matthew Garvin, Kristin Thomas, Nicole Davis, Emily Rhoden, Charlie Song
OUR Funded
78. HLP *Social and economic correlates of rates of abortion in the Russian Federation and the United States*
K'yone Zenobia Johnson, F. Stephen Bridges, Karla A. Caillouet
79. HLP *Sports Marketing Research: Gulf Coast Winter Horse Show*
Eric O Westervelt, Burr Miller, Elio Latella, Chance Buskey, Michaelangelo Alverina, Jessica Hsu, Charlie Song
OUR Funded
80. HLP *The Building and Design of a Restaurant*
Jordan Moss, Xuan Tran
SCAC Funded
Honors Thesis
81. HLP *Orange Beach Soccer Shootout*
Thomas Henriques, Brandon Von Achen, Kathy Franklin, Teddy Joseph, Charlie Song
82. ME *Measuring the Participants Spending of US Finals Cheer Competition and Its Economic Impact to Pensacola Community*
Tyler Moore, Kathryn Williams, Darwin Ignacio, Cary Powe, Charlie Song
83. MM *Development of B2B Solutions for the Fast Food Restaurants*
June Wei, Sumaiya Zabeen
SCAC Funded
84. MM *Development of A Cloud-Computing based Home-Schooling Education System*
Jordan Valdespino, William Zuhlke, Jun Wei
OUR Funded
85. MM *Development of a Mobile Graduate Assistant with Usability Features*
Chris Jefferies, Dustin Lennon, Chris Boning, Jun Wei
OUR Funded
86. MAT *A Cubic Convergent Method for Real Symmetric Eigenvalue Problems*
Zhaoxia Wang (Mary), Kuiyuan Li
87. MAT *Numerical Solutions for the Navier-Stokes equation in Two Dimensional Space*
Rebecca Smith, Jia Liu:
88. MAT *Statistical Modeling of Adolescent Risky Behavior and Seatbelt Use*
Thapelo Ncube, Justice Mbizo
OUR Funded
89. PHY *Laser Induced Fluorescence Spectroscopy of a Langmuir Monolayer of C-16 Fluorescent Dipyrinone Liquid Crystal*
Christian Struebing, Rebecca Chandler, Amy Renaud, Giovanni DeLuca, Aaron Wade, Chandra Prayaga, Michael Huggins
OUR Funded
90. PHY *Modeling of Electric Field in a Nonparallel Plate Capacitor.*
Nathan Cooper, Josiah Anderson, Laszlo Ujj
OUR Funded
91. PHY *Construction and Characterization of a Nanosecond Nd:YAG Laser Pumped Distributed Feedback Dye Laser Generating Picosecond Pulses*
Timothy Clark, Doug Stephen, Chris Weckerly, Laszlo Ujj
OUR & SCAC Funded
92. PHY *Dielectric relaxation in liquid crystals 4 -Octyl-4-cyanobiphenyl (8-CB) and C-16 fluorescent dipyrinone*
Andrei A. Kondrat'yev, Chloe Renfroe, Aaron Wade, Chandra Prayaga
OUR Funded

93. PHY *Optical Investigation of Novel Liquid Crystals*
Arielle Adams, Joseph Virgilio, Aaron Wade
OUR Funded
94. PHY *Parallel Performance Analysis between Free Response Environments and the Force Concept Inventory in Introductory Mechanics Courses*
Nicole Bobbitt, Aaron Wade
OUR Funded
95. PHY *Nonlinear Spectroscopy Investigations of Molecular Reorientation Under the Influence of an External Electric Field*
Josiah Anderson, Nathan Cooper, Laszlo Ujj
OUR Funded
96. PR *The Death of the Death of Philosophy: Dogmatic Science and Spectral Philosophy in Philosophic Naturalism*
Jordan Stanton, Sally Ferguson
Honors Thesis
97. PSY *A Review of Preconception Peer Education Programs at Colleges and Universities.*
K'yone Zenobia Johnson, Sarah Rupnaraine, Erica Jordan
98. PSY *An Exploration into Racial Differences in Social Anxiety and Trauma Symptomatology*
Jessica Thurmond, Elliott McCully, Erica Jordan
99. PSY *Character Strengths and Academic Achievement*
Jaclynn Lawhon, Erica Jordan
Honors Thesis
100. PSY *Comparing Discipline and Mother-Child Attachment in Single-Parent Versus Dual-Parent Families*
Elizabeth O'Connor, Paul Eastman, Rachael Lagozzino, Erica Jordan, Ph.D
OUR Funded
101. PSY *Content analysis of helpline calls: A retrospective study*
Anna Hinesley, Margeaux Donovan, Ronald Belter
OUR Funded
102. PSY *Co-Occuring Forms of Child Maltreatment as it Relates to Adult Social Anxiety and Trauma Symptoms in University Undergraduates*
Jessica Thurmond, Erica Jordan
OUR Funded
103. PSY *Co-occurring Childhood Maltreatment: An Exploration of the Predictors of Higher Academic Achievement and Social Efficacy in the Workplace*
Jessica Thurmond, Nichole Humphreys, Erica Jordan
104. PSY *Cross-cultural comparison of resilience of parents of sick children in Colombia and the United States*
Nicolette Ramirez, Sherry K. Schneider
OUR Funded
105. PSY *Differences in How Younger and Older Adults Select Mental Health Treatments*
Alaina N. Talboy, Rodney P. Guttman
OUR Funded
106. PSY *Differences in Virtual Team Interpersonal Behaviors and Performance Across Technologies*
Kelly J. Manning, Laura White, Sherry Schneider, Steve Kass, Steven Case
107. PSY *Effectiveness of Training Visual Working Memory in Older versus Younger Adults*
Angelica Sullivan, Lisa Blalock, Rodney Guttman
108. PSY *Parental Characteristics and Academic Success of Undergraduate Students.*
Katelyn Cleary, Erica Jordan
109. PSY *Predictors of Burnout in University Students*
Jessica Gladstone, Erica Jordan
110. PSY *Psychological Capital, Procrastination, and Persistence within the Academic Domain*
John D. Hale, Sherry Schneider, Steve Vodanovich
111. PSY *Semantic knowledge eliminates age-related differences in Working Memory Capacity,*
Caitlan Webster, Jessica Thurmond, Lisa VanWormer
112. PSY *Source Monitoring in a Multimedia Learning Task*
Cynthia Wallace, Lisa Blalock
OUR Funded
113. PSY *The Differential Experience of Childhood Maltreatment Between Genders: Is It Really Different?*
Jessica Thurmond, Raquita Peasant, Erica Jordan
OUR Funded
114. PSY *The Role of Semantics During Inhibitory Control in Cognitive Aging*
Katherine Guterman, Nicolette Ramirez, Elizabeth Oconnor, Lisa VanWormer, Rodney Guttman
SCAC Funded
115. PSY *The Roles of Stress Perception and Attachment in Resilience of Adult Children of Alcoholics*
Kristen Kessler, Erica Jordan
116. PSY *The Successful Spiritual Romantic Relationship: An Overview of Common Themes of Success & Failure Across Psychological Research and Ancient & Contemporary Spiritual Texts*
Margeaux Donovan, Michael DeMaria
Honors Thesis
117. TED *Fostering Motivation*
Donald D. Cooper, Kelsey Fleming, Giang Ngyugen-Ngyugen
OUR Funded
118. TED *Visual representation between Basic Trigonometric Functions and the Unit Circle*
Kelsey Fleming, Giang Ngyugen-Ngyugen
119. IDS *The Benefits of Diversity Training*
Tara Jordan, Roz Fisher
- Performances and Presentations**
- COM *Seeking Redemption: The Clergy Project applied to Kenneth Burke's Terms of Order*
David Feliciano, Tressa Kelly
- MUS *Robert Schumann's Illness and Its Effect on His Music*
Patricia Izbicki, Hedi Salanki-Rubardt

Abstracts

1. Ecommerce in the Banking Industry

Calvin Crenshaw, June Wei

Department of Accounting/ Finance

As technology advances, the banking industry creates ways to incorporate the technological features. Electronic systems ultimately provide more efficient ways of conducting business and makes banking much more convenient. The pages that follow define ecommerce and its place in the banking industry. A detailed analysis is also provided which breaks down how each component of the value chain uses ecommerce to be more effective and complete tasks. In addition, an analysis is also provided that breaks down the e-customer chain to identify the use of ecommerce for both internal and external customers of the bank and the benefits received. A comparison of the top ten firms in the banking industry outlines how each of the banks use ecommerce in the company's value chain and e-customer chain. Another table provides a description of the business applications as it applies to internal and external customers. The research aims to identify how the top ten firms incorporate ecommerce and what could be done differently if anything.

2. A Preliminary Palynological Assessment of Thompson's Landing Archaeological Site (8ES950)

Morgan F. Smith, John Bratten

Department of Anthropology

Palynology (pollen analysis) can be an informative avenue of research. It has particularly interesting applications in Archaeology. Pollen analysis can be used to determine what kinds of foods were grown, processed, and digested by past human populations. It can also be used to reconstruct ancient environments. This information is useful to elucidate in what season sites were inhabited, the climate, and the various species of vegetation present. I will be analyzing a soil sample taken from an archaeological site on the University of West Florida campus, designated Thompson's Landing (8ES950), for evidence of pollen. My initial goal is to determine whether or not pollen is preserved in the sample. The process of determining whether or not pollen is present in the sample involves both mechanical and chemical stages. Samples must be isolated, centrifuged to consolidate, and then freed of

organic material and siliceous material. If possible, I will attempt to determine what types of pollen are evident, in what quantities, and propose an initial paleoenvironmental reconstruction of the site.

3. Allometric Analysis of Prehistoric Shell Middens in the Escambia River Estuary

Thomas Jeffers, Ramie Gougeon

Department of Anthropology - OUR Funded

Prehistoric populations living in the Escambia River basin included primarily three species of shellfish in their diets: Eastern Oyster, and the brackish water marsh clams *Rangia* and *Polymesoda*. Any combinations of these shellfish are present in the archaeological middens in the area and are present at Thompson's Landing (8ES950), a site on the University of West Florida campus. By more carefully accounting for fragmentary shells collected in archaeological samples, I demonstrate that the improper identification or under-identification of marsh clams can significantly skew biomass estimates based on allometry. *Polymesoda* produces more biomass per unit of shell weight as compared to *Rangia*, therefore the proper identification of marsh clam species can produce up to a 5 to 15 percent difference in estimated biomass. My analysis of samples from Thompson's Landing shows increases in biomass totals in the expected 5-15 percent range.

4. Analysis of Waterlogged Wood Conservation Techniques

Shandra Allen, John Bratten

Department of Anthropology - Honors Thesis

Adequate conservation methods for recovered wooden shipwrecks have puzzled conservators and archaeologists for some time. With each method, comes a set of drawbacks. However, conservators have slowly been able to acquire information through various attempts and studies associated with shipwrecks like the *Wasa* and the *Mary Rose* in order to improve positive outcomes and limit negative ones. Although a handful of articles have recently been written on a few select methods for wood conservation, a holistic comparison of methods is significantly rare or unavailable. For this reason, I have composed this paper in order to compare nine basic wood conservation methods. The work I have done includes research and

a nine-week experiment using waterlogged oak from the 1559 Spanish fleet ship, Emanuel Point II. As a result of completing this experiment, I was able to determine that, for this specific type of wood, the overall best aesthetically pleasing and stable methods were: the Sodium Silicate, Sucrose, PEG 3350/Alcohol, PEG 3350/Water, and PEG1450/Alcohol methods. The others contained softer textures and unnatural appearances; therefore, I would not recommend them. I hope to provide others interested in conservation with a basic overview of the various methods that may be utilized to conserve waterlogged wood, including the changes in color, dimension, and natural appearance of each.

5. Conservation and Coins: A Look at Spanish Currency in the New World

Stephanie Dominici, Jayne Godfrey, John Bratten

Department of Anthropology

The University of West Florida's 2012 summer maritime field study school conducted excavations on the Emanuel Point II Shipwreck, a vessel associated with the 1559 colonization fleet of Don Tristán de Luna y Arellano. A small, concreted object, circular in shape, was recovered and treated at the university's conservation lab. With the use of radiography, the concretion was identified as a silver 2 reale, dating to the 16th century. This poster will present the conservation techniques used to stabilize the coin and an analysis of the coin's diagnostic features including why, where, and when this coin was minted. In addition, this poster will include information relating to Spanish assayers and taxation.

6. Bacterioplankton Community Response to UV Radiation in the Northeastern Gulf of Mexico

Josette Hutcheson, Katelyn Houghton,

Christian Riesenfeld, Joseph Moss,

Richard Snyder, Wade Jeffery

Department of Biology

Bacterioplankton serve a key role in the function of the microbial loop and are a crucial part of the planktonic community. UV radiation causes a number of changes to marine plankton including damage to DNA and decreases in productivity. An indirect influence of climate change is the potential increase the penetration of UV radiation in marine systems. Increasing UV radiation through the water column has the potential to affect depth distribution and thus ecological function of bacterioplankton in the sea. This research examines microbial community shifts caused by varying UV exposure. It is hypothesized that UV exposure causes a shift in microbial community structure by selecting for UV resistant strains and selecting against UV sensitive strains. 16s rDNA analysis of structural and functional genes was used to determine diversity of microbial communities in the Northeastern Gulf of Mexico.

7. Ciliate protest community structure in the plankton of the northeastern Gulf of Mexico determined by particle analysis and molecular diagnostics.

Preston Shisgal, Christian Riesenfeld, Joe Moss,

Richard Snyder, Wade Jeffery,

Department of Biology

The BP MC252 oil well failure highlighted the paucity of knowledge of the offshore ecosystems of the northeastern Gulf of Mexico. For this study samples from the NW Florida Bight Shelf were collected on three transects that converge on the head of DeSoto Canyon. Sampling has targeted seasonal change over this spatial scale. Collected samples were analyzed for Ciliate populations with a particle image analysis technology (FLOWCAM) and with sequencing of 17S rRNA genes to determine overall Ciliate biodiversity and how these populations respond to changes in spatial and seasonal environmental changes.

8. Comparing the effects of temperature on metabolic rates in water, sediment, and air for the coquina clam, *Donax variabilis*

Tiffany Nay, Jane Caffrey,

Department of Biology - OUR funded

Donax variabilis is a colorful coquina clam that is found frequently in intertidal zones on beaches across the northeast and has been known to ride the surf to move farther up the beach. Their abundance has made them good for uses such as jewelry and production of clam chowder. With current increasing temperatures, this species will be exposed to both warmer sediment, water, and air temperatures which could further affect the organism's metabolic rate. Prior research has shown that changes in metabolic rate result in an even greater changes in growth rate. Coquina clams will be collected and acclimated at four different temperatures. After exposure, oxygen consumption will be measured. For the water and sediment, the analysis will be through Winkler titration while the air experiments will be performed using a Gilson respirometer. Q10 values for each of the temperatures will be calculated and compared for each environment. By comparing the effect of temperature on metabolic rates we can estimate an effect on growth. If these organisms are not growing to their normal capacity, the commercial industry could potentially be affected and would put additional pressure on natural populations.

9. Determining the Methodology of Gene Testing of the MSX1 Gene

Cierra Sapp, Hui-Min Chung

Department of Biology - OUR Funded, Honors Thesis

Hypodontia, a malformation in which a person is missing at least one permanent tooth, is the most common craniofacial congenital abnormality in humans. The absence of permanent teeth can be related to both environmental

factors and genetics. Transcription factors Msx1 and Pax9 are vital in ensuring normal tooth development. This project focuses on MSX1, a gene located on chromosome 4p; mutations of this gene have been known to cause hypodontia. One MSX1 mutation was found in which a cytosine was substituted by a thymine base on Exon 2; this resulted in a stop codon in the 193rd codon position, generating a much shorter MSX1 protein and a BfaI site in the DNA. It is not clear how often this MSX1 gene mutation occurs in hypodontia patients. This experiment will be using BfaI-RFLP to analyze the DNA sequence relevant to the 193rd amino acid of the MSX1 gene in ten to fifteen individuals. After PCR purification, each sample will be digested with BfaI to determine whether each individual displays the mutated or wildtype allele. This experiment will also utilize the cheek cells of individuals with all 32 teeth as controls. So far, the experimental conditions of the MSX1 gene amplification and BfaI digestion have been set up, and the DNA of eight individuals with missing teeth have been isolated and amplified. Knowledge obtained from normal and abnormal tooth development of individuals can one day be beneficial in advancing agenesis diagnosis, creating treatment plans, and preventing craniofacial congenital abnormalities.

10. Development of a Propidium Monoazide-Polymerase Chain Reaction (PMA-PCR) assay for the fingerprinting of viable benthic microalgae in marine sediments.

Chelsea McCurry, Richard Snyder
Department of Biology - Honors Thesis

Benthic microalgae (BMA) are essential members of marine sediment communities and in sandy and mudflat systems tend to be most commonly represented by diatoms. These diatoms are vital primary producers, act as food sources to heterotrophs, and help stabilize the sediment. Numerous studies have focused on the diversity, richness, and changes to the diatom communities in various environments. Unfortunately, a common limitation in current community profiling methods is the inability to isolate a molecular signal from the living constituents alone. DNA from decomposing cells and free-floating fragments are often picked-up in downstream applications such as denaturing gradient gel electrophoresis (DGGE). Our goal is to validate and optimize a technique, predominately associated with bacteria, which will provide an assay capable of eliminating the compromised DNA from the living fingerprint. Propidium monoazide (PMA) is a dye that selectively enters compromised membranes and intercalates with the DNA ultimately preventing the amplification of dead genetic material during the polymerase chain reaction (PCR). Using a benthic diatom, *Cylindrotheca fusi-*

formis, isolated from both sandy and mudflat habitats within Grice Cove, James Island, SC, we have optimized PMA concentration and the number of PMA treatments. Results from DGGE runs showed that the use of 50 μ M PMA two times, with a dark exposure of 30 minutes and light exposure of 12 minutes, was most effective. Additional work will refine the current methods and validate the procedure through laboratory trials and spiking environmental samples.

11. Creating pen-2 mutant in *Drosophila melanogaster* by transposable element excision technique

Matthew Nalley, Hui-Min Chung
Department of Biology - OUR Funded

The Pen-2 protein is one subunit of the four-part protease complex gamma secretase, which is a key component in regulating development across the animal kingdom; malfunction of gamma secretase is involved in pathological causes of Alzheimer's disease in humans. The gamma secretase complex forms when Pen-2, Presenilin, Nicastrin, and Aph-1 combine. Pen-2 is thought to be involved in stabilizing the complex and processing Presenilin, allowing gamma secretase to mature. The other three protein subunits of gamma secretase have been studied through genetic analysis using fruit flies with mutants of their respective genes, but mutants of pen-2 were not available. Further studies using new pen-2 mutants will facilitate uncovering Pen-2's activity in the gamma secretase complex. Mutants of pen-2 were created through excision of the transposable element Mi{MIC} from pen-2MI02639 (hereafter pen-2MiMIC). The pen-2MiMIC fly strain was crossed with another fly line containing a transposase capable of excising MiMIC to potentially create a loss-of-function pen-2 mutation. Phenotypic markers embedded in both parents allowed for selection of proper male progeny, which were characterized further with genetic crosses and DNA analysis.

The results of genetic crosses suggest out of about 130 lines more than one hundred have a potential loss-of-function mutation of pen-2 or adjacent genes. Molecular characterization of these lines using polymerase chain reaction (PCR) and DNA sequencing will narrow the group to strains with mutations in pen-2 but not adjacent genes. To date seven lines have been sequenced and three identified with a pen-2 mutation.

12. Galápagos Populations: Analyzing Population Research to Study Weaknesses in Conservation Efforts of Targeted Species

Anna Garcia, Richard Snyder
Department of Biology - Honors Thesis

The Galápagos Islands possess an extreme biodiversity filled with endemic species that are at risk from external pressures that are altering the evolutionary path. As many native species populations are declining, conservation biologists are concerned about the future that lies ahead for the Galápagos. Research is needed to create management strategies that will benefit the long term success of native species. Population Viability Analysis (PVA) is a method used to model current situations in order to project a possible future. PVAs provide insight on factors that can alter the success of a species population. Conservationists aim to protect the biodiversity and natural processes that occur in the Galápagos by utilizing PVAs. Two major factors that are significantly impacting the future of the Galápagos are invasive species and climate change effects of El Niño periodicity and intensity. More research is needed on the latter of the two factors to help improve the status of projected scenarios. Case studies of the Mangrove finch (*Camarhynchus heliobates*) and the Galápagos penguin (*Spheniscus mendiculus*) were analyzed to highlight weaknesses and gaps in current research. Recommendations for improving the current state of the Galápagos were suggested through multiple programs aiming to bridge the scientist-practitioner gap. The future of the Galápagos lies in restoring and maintaining the ecological integrity through the support of the local community.

13. Influence of a gypsum spill on sediment phosphorus concentrations in Grand Bay, Mississippi

Cheyenne Hunt-Alderson, Jane Caffrey
Department of Biology

In 2005, a gypsum spill hit Grand Bay, Mississippi. Gypsum is a mineral used to make wall board. High concentrations of phosphorus (4000 - 5000 ppm), ammonia and fluoride were found following the spill and then in 2012 following Hurricane Isaac. The tidal marsh and habitats were destroyed or damaged from the chemicals. Is phosphorus from the spill still present in Grand Bay sediments? Sediment cores were collected in December of 2012 and were kept frozen until the cores were processed. Subsamples were collected for analysis of grain size, water content, phosphorus content, and sediment chlorophyll a. Results were compared between two different sites: one close to the spill and one further away. Clay content in the samples was used to normalize sediment phosphorus since clays naturally have higher levels of phosphorus than the other sediment types. Sediment chlorophyll a is a measure of the biomass of the benthic microalgae which could be enhanced by the phosphorus inputs.

14. Nitrification and importance of ammonia oxidizing archaea and ammonia oxidizing bacteria in seagrass beds of Pensacola, FL

Danielle Pfeiffer, Jane Caffrey
Department of Biology - OUR Funded

Seagrass communities are very productive areas and contribute to the ecosystems by providing critical nursery areas for many juvenile fish and developing invertebrates. Since there has been a severe decline in the seagrass beds, research for restoration is very important. The focus of this study is on ammonia-oxidizing archaea (AOA) and ammonia-oxidizing bacteria (AOB) and their role in nitrification of several transplant and native seagrass beds of Pensacola, FL. Potential nitrification rates were measured in sediment slurries at 9 locations. Rates at the different sites were variable, but generally higher in *Ruppia maritima* and the freshwater macrophyte beds. Using qPCR, Ammonia-oxidizing archaea (AOA) were found in all sediment samples of these transplant and native seagrass sites. However the quantitative data of AOA's showed no significant trend between seagrass locations, whether transplant or native. Although these data seems inconclusive, further research and qPCR for AOB's will allow us to see who plays a larger role in nitrification of the seagrass beds of Pensacola and would ultimately aid in restoration efforts of the Florida Department of Environmental Protection.

15. Petroleum Hydrocarbon-Degrading Bacteria Enriched from Deep-Sea Sediments Associated with the Deepwater Horizon Gulf of Mexico Spill.

Bryan Davis, Joe Eugene Lepo, Wade H. Jeffrey
Department of Biology

Recent studies of microbial response to oil spills rely upfront on molecular biological tools, e.g., T-RFLP, metagenomics. In contrast, we enriched and isolated bacteria that utilize petroleum hydrocarbons as their sole C-source. Deep-sea sediments collected along a transect crossing the well-head of the Gulf of Mexico BP oil spill as part of the Consortium for the Integrated Modeling and Analysis of the Gulf Ecosystem (C-IMAGE) were stored at -20°C. Homogenized sediments were inoculated to Bushnell-Haas broth containing n-hexadecane, or a PAH mix, or artificially weathered crude oil. Enrichments were shaken at 25°C until visibly turbid, then streaked to trypticase-soy agar. Unique colonies inoculated to sole C-source (various PAHs or hexadecane) media ensured ability to grow on those substrates. Approx. 90 strains have been preserved at -80°C. We will PCR-amplify 16S rRNA genes, to be sequenced for phylogenetic information; PAH-, n-alkane- and biosurfactant-encoding genes will be analyzed for biodegradation guild capabilities; strains of interest will be characterized physiologically.

16. Spatial and Temporal Variations in the Community Structure of Marine Archaea: The Gulf of Mexico

Sarah Tominack, Christian Riesenfeld, Joseph Moss, Richard Snyder

Department of Biology

Since the Deepwater Horizon oil spill in 2010, much emphasis has been placed on understanding the processes, both physical and biological, that occur in the Gulf of Mexico. On the micro-scale, bacterioplankton and archaeoplankton play major roles in the cycling of nutrients through the microbial loop, and macro-scale geochemical cycles. Understanding the changes that occur in the community structure of archaea in the Gulf of Mexico over space and time has the potential to shed new light on the transfer of energy into and out of the system as well as through higher trophic levels. Using clone libraries constructed with the archaeal 16S rRNA sequence, samples collected across the continental shelf of the northern Gulf of Mexico will be compared seasonally and spatially. Physical and chemical water column parameters during time of collection and overall current structures will help define the limits and conditions for occurrence of these important microbes.

17. Temporal and spatial responses in bacterioplankton community structure and function after exposure to oil and dispersants in the Northeastern Gulf of Mexico

Katelyn Houghton, Josette Hutcheson, Christian Riesenfeld, Joseph Moss, Richard Snyder, Wade Jeffrey

Department of Biology

The Deepwater Horizon Oil Spill in 2010 significantly impacted the planktonic ecosystem of the northern Gulf of Mexico. A key element of the planktonic system is the bacterioplankton, which serves as a base of the food web and was instrumental in degrading the oil itself. It has been hypothesized that exposure to oil and or dispersants may change microbial community structure by selecting for those strains capable of oil degradation while selecting against those for whom oil and or dispersants are inhibitory. Through the use of 16S rDNA clone libraries, community structure before and after oiling was compared through function and structural diversity. This research examines short term spatial and temporal responses of the microbial community to oil and dispersants.

18. A Physical Chemistry Laboratory Experiment: Measuring the Speed of Sound using Nitrocellulose

Brandon Burnette, Jacob Stepherson, Karl Reyes, Karen S. Molek

Department of Chemistry - OUR Funded

The speed of sound was experimentally determined through various gases and under several temperature conditions using a machined vacuum apparatus designed using Solid Works. Nitrocellulose, a low order explosive, was synthesized and ignited to generate the

sound-wave. A pair of microphones, in combination with custom made amplifiers and a Tektronix TDS 210 oscilloscope, measured and collected the speed of sound data. Measurements were collected in Argon, Carbon Dioxide, Nitrogen, and atmospheric gases at ambient pressure (760 torr), as well as ambient and reduced temperatures (25 to -20°C). The vacuum tube was cooled using liquid nitrogen in combination with a layer of pipe insulation. This data was compared to previously reported literature values to confirm accuracy, and an average of 1.5% error was achieved. This experiment has been added to the Physical Chemistry Lab curriculum, and the students who ran the experiment achieved an average percent error of less than 3%. Results from the aforementioned experiments will be presented.

19. Calibrating a Matrix-Assisted Laser Desorption/Ionization Reflectron Time-of-Flight Mass Spectrometer by Tracking Ion Potentials through the Mass Spectrometer

Joseph T. Brice, Georgia C. Boles, Brandon A. Burnette, Karen S. Molek,

Department of Chemistry - OUR Funded

A matrix-assisted laser desorption/ionization reflectron time-of-flight mass spectrometer (MALDI RTOF-MS) was calibrated by optimizing the electric potentials from the ionization source to the detector. Through the use of a picoammeter, ions were detected throughout the analyzer by setting up a potential difference used to attract ions. Accelerating and reflecting voltages were adjusted to maximize the measured ion currents. These voltages were compared to the theoretical potentials via a SimION model of the instrument. The samples used for calibration were PEG 900 and Angiotensin II, which provided a mass range between 850-1046 amu. The same samples were used to measure mass spectra via stacked MCP detectors in a chevron configuration. The data was collected and analyzed using National Instruments LabView software and a Tektronix DPO 3054 oscilloscope. The experiments were run multiple times to ensure reproducibility; and mass spectra obtained were compared to literature spectra to ensure accuracy. The results of the calibration testing will be presented.

20. Cationic ring-opening polymerization of glycidol in the presence of emulsifiers

Carla M. Staton, Randy L. Hightower, Louis A. Searcy, A. Timothy Royappa

Department of Chemistry - OUR Funded

Glycidol was polymerized by BF₃-initiated cationic ring-opening polymerization using various concentrations of THF and diglyme as emulsifying agents. A control sample of polyglycidol was also synthesized without any added emulsifier. Polymerizations were monitored by Gas Chromatography (GC). Whenever a reaction was

99% or more complete, the polymerization was quenched by adding water and stirring. The polymer was obtained by rotary evaporation and/or drying on a vacuum line followed by freeze drying. The resulting polymers were analyzed by differential scanning calorimetry (DSC), by ¹H and ¹³C NMR, FTIR and gel permeation chromatography (GPC). The solubility of the polymers in various solvents was also examined. The solubility tests and the NMR and IR spectra showed that THF had copolymerized with glycidol. There was no discernible effect of diglyme on the polymerization, although some traces of free diglyme were noted in the NMR spectra. Molecular weights were increased by a small amount in the presence of the emulsifying agents. There was no distinct difference between the effect of THF and diglyme.

21. Effects of Salinity and Organic Matter Content on Triclosan Photo-degradation

Janae Baptiste, Pamela Vaughan,

Department of Chemistry - OUR Funded

Triclosan is a bactericide used in a variety of personal care products such as toothpastes, deodorants, and hand soaps. After its initial use, the anti-microbial agent enters the environment where it can photo-degrade to 2,7/2,8-dibenzodichloro-p-dioxin, 2,4-dichlorophenol, and 2,4,6-trichlorophenol. Dioxins are members of a class of compounds which are extremely toxic to plant, animal, and human life. This study investigates the effect of salt and organic matter content on the rate of photochemical decay of triclosan. Samples with triclosan in water were adjusted by means of addition of artificial seawater and humic acid and irradiated. The rate of photo-degradation increased with the addition of salt. Triclosan exposed to full sunlight appears to follow first order decay kinetics.

22. Effects of Silane Structure on Zinc Oxide Quantum Dot Synthesis

Lena Ibrahim, Michael Smith, Samuel Bynum,

Karen Molek, Pamela Vaughan

Department of Chemistry - OUR Funded

Quantum dots are unique nanoparticles which, when excited with ultraviolet light, will fluoresce. Water-soluble zinc oxide quantum dots were synthesized and used as a control using a unique synthetic method. In this method, (3-glycidyloxypropyl)trimethoxysilane, or KH-560, was used as a surface modifier in order to cap the molecule and deter aggregation. Our synthesis introduced (3-aminopropyl)-trimethoxysilane to test the dependence of quantum dot formation on the silane structure. An additional modification was made by substituting (3-aminopropyl)-triethoxysilane in an effort to create more biologically innocuous quantum dots. Chemical and physical properties were compared to determine effects of silane structure on the quantum dots. The quantum dots were characterized using infrared spectroscopy (IR), UV-

Vis spectroscopy, scanning electron microscopy (SEM), fluorometry, and X-ray diffraction (XRD). Results of the synthesis and characterization will be presented.

23. Humic Acid and Salinity Effects on PAH Photodegradation with Variable Light Exposure

Ryan Pichulo, Dane Brankle, Jini Curry, Pamela Vaughan

Department of Chemistry

The photodegradation kinetics of PAHs in aqueous solution was examined in response to a variety of environmental factors such as salinity, light exposure, and humic acid content. 25nM solutions of naphthalene, phenanthrene, and pyrene were exposed for up to 24 hours and measured using bulk fluorometry. Naphthalene and phenanthrene solutions exposed over a 24 hour period show greater degradation in the presence of UVB than UVA light exposure. The rate of photodegradation observed for pyrene was higher in the presence of UVA than UVB light exposure. These results will be discussed in relation to published works which have reported conflicting degradation rates for phenanthrene and pyrene. The effects humic acid content and salinity on photodegradation rate constants will also be discussed.

24. Interesting New Chemistry of Pyrrole b-Amides

Alex Fisch, Eric Randolph, Michael T Huggins

Department of Chemistry - OUR Funded

Pyrrole b-amides are useful building blocks for the preparation of novel molecular architectures that can be used in supramolecular chemistry and sensor development. Under basic conditions, pyrrole b-amides and an a-aldehyde produce different condensation products with pyrrolinones depending on the amide substitution. Primary amides formed the expected dipyrinones, but expected underwent a subsequent trans-amidation with the pyrrolinone nitrogen to produce an asymmetric imide. Under the same conditions, secondary amides produced the expected dipyrinones. Current results will be presented.

25. Manganese Oxide Nanopowder Study: Synthesis, Characterization and Surface Assisted Laser Desorption/Ionization

Georgia Boles, Karen Molek

Department of Chemistry - OUR Funded

Several manganese oxide nanopowder species, including MnO₂, Mn₂O₃, and Mn₃O₄ have been synthesized via new synthetic routes for the integration as surfaces in Surface Assisted Laser Desorption/Ionization Mass Spectrometry (SALDI MS). MnO₂ containing species were synthesized from aqueous solutions of KMnO₄. Mn₂O₃ was synthesized from an aqueous solution of Mn(NO₃)₂, while the Mn₃O₄ species was synthesized from KMnO₄ in benzyl alcohol. Each of the control syntheses were modified so that

the syntheses could be repeated via microwave, oven, and furnace-assisted methods. After being synthesized, each of the nanopowders was characterized according to their size, composition and phase, and absorbance properties using Scanning Electron Microscopy (SEM), X-Ray Diffraction (XRD), and UV-Vis Spectroscopy, respectively. The resulting spectra were compared to literature spectra to ensure that pure samples of each species of nanopowders were obtained. Results of the synthesis and characterization will be presented.

26. NMR study of neoglycosides using 3-(N-methoxyamino)-decalin as a model

Ashley Lambert, Patricia Izbicki, Randal Goff
Department of Chemistry - OUR Funded, Honors Thesis
Neoglycosylation is a technique that generates cyclized aldose sugars by causing the disguised aldehyde to bind to specific amine functional groups. The advantage of neoglycosylation, the conventional method of glycosylation is simplified. This involves the avoidance of 1) protection of the sugar's reactive hydroxyl groups, 2) activation of the ring, 3) the glycosylation step itself, and 4) deprotection. By means of neoglycosylation a library of neoglycosides will be generated using 3-decalol, a bicyclic hydrocarbon. It is advantageous to employ neoglycosylation because it has helped to alter the biological activity of pharmaceutical agents containing the structure of 3-decalol. These include changes in the mechanism of action of digitoxin, a cardiac glycoside; improvement in the anti-HIV-1 activity of betulinic acid, a triterpenoid; and increase in anticancer activity of cycloamine, a steroidal alkaloid. Nuclear magnetic resonance (NMR) spectroscopy will be utilized to verify and analyze the neoglycoside structures. The ultimate goals of this research are to 1) create a library of neoglycosides from which we can 2) compile NMR data to act as reference for future neoglycoside libraries.

27. Photochemical Degradation and Bacterial Growth Response Crude Oil

Gabrielle Daniel, Rose Atkinson, Noel Harris, Ryan Pichulo, Dane Brankle, Jamie Trindell, Pamela Vaughan, Wade Jeffery
Department of Chemistry - OUR Funded
Crude oil from Jay, FL was examined to determine the effect of varied light exposure on the degradation and resulting toxicity to bacterial growth. Samples containing 2% oil in sterile seawater were incubated at constant temperature for 15 days with treatments of full sun, PAR only and dark. The resulting water accommodated fraction was removed and polycyclic aromatic hydrocarbon and alkane concentrations determined. Chrysenes peaked at day 6 under full sun. Naphthalenes were constant over time and independent of light. A portion of the WAF was incubated with seawater to determine the extent of bacterial growth inhibition determined by 3H-leucine incorporation. WAFs developed in the dark inhibited growth at

approximately 40%. The no UVR WAF had the highest level of inhibition to bacterial growth. These results have implications for how photochemical weathering may alter the impact of spilled oil on microbial communities in surface waters.

28. Synthesis and characterization of titanium oxide nanopowders

Christen K. Butterfield, Ryan M. Oberhausen, Gregory S. Kostelac, Karen S. Molek
Department of Chemistry
Titanium oxide nanoparticles were synthesized using Titanium Tetraisopropoxide and varied pH values. The synthesized nanopowders were then heated to temperatures between 80° C and 750° C varying between one and two hour time increments at each temperature. Differential Scanning Calorimetry (DSC) was used to further refine the heating ranges to determine a more accurate range at which the nanopowders changed phase. After being synthesized, each of the nanopowders were characterized according to their size, composition and phase, and absorbance properties using Scanning Electron Microscopy (SEM), X-Ray Diffraction (XRD), and UV-Vis Spectroscopy, respectively. The spectra and diffraction patterns were used to determine the temperature required to induce a phase change from the amorphous to anatase structure and anatase to rutile structures. The resulting spectra were compared to literature spectra to ensure that pure samples of each species of nanopowder were obtained.

29. Synthesis and Characterization Studies of Dipyrnone-based Liquid Crystals

Dylan Christiansen, Alex Vega, Michael T. Huggins
Department of Chemistry - OUR Funded
Novel dipyrnone and fluorescent dipyrnone analogs were synthesized as potential liquid crystals. The synthesis was accomplished in relatively short syntheses with moderate to high yields. The synthesis and characterization of these new dipyrnone and fluorescent dipyrnone liquid crystal systems will be presented.

30. Synthesis of HIV-1 Capsid Protein Inhibitors

Tia Jarvis, Joshua Brown, Rebecca Chandler, Michael T. Huggins
Department of Chemistry - OUR Funded
In the human immunodeficiency virus (HIV) replication life cycle, the capsid protein has been identified as an attractive inhibition site due to its role in the formation of the capsid core which is crucial for viral infectivity. To date, more than 200 small molecules have been screened for their inhibition activity using {1H, 15N} HSQC titrations. Using a structure activity relationship (SAR) analysis, several synthetic targets were identified. The results of the SAR analysis as well as synthesis and binding data for the capsid protein inhibitors will be presented.

31. Toxicity Effects of Polycyclic Aromatic Hydrocarbons During Varied Sunlight and Temperature Exposure

Rose Atkinson, Pamela Vaughan
Department of Chemistry - Honors Thesis
The toxicity effects of individual polycyclic aromatic hydrocarbons (PAHs), naphthalene, phenanthrene, and chrysene, directly introduced to bacterial colonies obtained from the live salt water collected in the Pensacola Bay area were examined. A previous experiment examining toxicity of whole oil suggested relative toxicity of these three compounds to be naphthalene >phenanthrene>chrysene. When PAH concentrations were varied from 1 ppb to 100 ppm, 5 ppm was determined to have 50% toxicity. This concentration was then used to determine individual PAH toxicities under varied light and temperature conditions. Triplicate samples were exposed to full sunlight and PAR only light through 40 mL Teflon bottles under two temperature conditions: ambient and ambient -5°C. The resulting toxicity levels from these treatments will be discussed.

32. How Does Change In Leadership Affect Company Morale and Worker Productivity?

Sashel Marquis-Wedderburn, Tressa M. Kelly,
Department of Communication Arts - Honors Thesis
This research project focuses on the inner working of an organization that is undergoing top-down change. To understand how and why it affect worker productivity and company morale. Working closely with the Small Business Development Center of Florida State Office (SBDC) to understand how planned or unplanned changes occur with an organization inadvertently affect worker productivity and company morale, I will use a qualitative approach to understand how change in leadership affects worker productivity and company morale. This project will employ the use of interviews, observations and performance studies. Through the collection of interviews and observations over a span of one year, I hope to better understand the frustration experienced by workers at the SBDC specifically and those engaged in organizational change generally. A performance study is where an individual embodies another person's story in order to receive a deeper understanding of an issue. Narratives from the interviews and observation field notes will provide the foundation for the performance. I will get a taste of the Cooperate world (from an outsider's perspective) and semi-emerge myself into their culture.

33. The Intersection of Law and Psychology: Effective Trial Strategies

Dennis Foster Jr., Kimberly Tatum
Department of Criminal Justice/ Legal Studies
In 1893 noted psychologist and Cornell professor James Cattell performed a study to determine if there was a cor-

relation between the perceived confidence of a person's testimony and the validity of their statements during a trial. His findings revealed that a confident testimony didn't equal correctness. Cattell's surprising findings and new -found acclaim ignited the interest of other psychologists. Since then the use of psychology has exploded in the legal profession and has become a necessary part of any trial. Although originally applied mostly in voir dire, psychology has now been integrated into every part of a trial, from opening statements to closing arguments. Through the use of attorney interviews, recorded experiments, and research based opinions, this paper will examine specific trial strategies and principles that have arisen because of psychology's increased importance and relevance to the legal field."

34. Android Game Development

Ryan Baxter, Steven Case
Department of Computer Science
The Android Open Source Project offers a unique programming experience that builds heavily upon the foundations of open source development. While the estimation of Androids 75% smartphone market share is astounding, the importance of this platform (which does not end with the fast growing user base) is self-evident in that more people are using a mobile device as their primary computing device. The design of this project explores the tools and technologies necessary to develop applications for the Android platform. Using several programming text books and other methods of research, a project was put together to develop a complete Android application capable of market launch. The project has resulted in the successful development of a working, feature-rich chess game demonstrating high level mathematical computation that can be installed and enjoyed from any Android device (2.2+). The struggle and success of the project will be discussed along with the development tools and technologies utilized. A focus on the general architecture and organizational pattern of a complete Android application package will be summarized along with the lessons learned along the way.

35. Material Safety Data Sheets on a Mobile Device

Laura Hiltabrand, Laura J. White,
Department of Computer Science
Many people have allergies, but less recognized are those with chemical sensitivities. Chemicals are used in ways we might never expect. For example, formaldehyde is used in the manufacture of "no iron" clothing, cosmetics, cleaning products, particle board, paper grocery bags, new carpet, and even as a food preservative. Obtaining chemical information about common products is not always an easy task. A mobile iPhone application that provides quick access to key product information, as well as a method of notification when a product contains an

ingredient users have preselected, will reduce inadvertent exposure and harm that users might otherwise experience. Users of this application will be able to perform searches and matching products will be displayed in a list. After selecting a product, a subset of details from the Material Safety Data Sheets (MSDS) will be displayed. Access to the full MSDS file is also provided. When product details are viewed, the product is added to a product history to provide quick access to recently viewed products. The iPhone application will also provide users with the ability to set notification flags on chemical ingredients and organize notifications into categories. Users will be presented with a category specific notification whenever they access a product that contains an ingredient on their personal notification list.

36. Natural Language Processing for Home Automation

*Douglas Stephen, Andrew Haynes, Eman El-Sheikh
Department of Computer Science*

As technology has advanced over the years, the primary goal of innovators has always been to make our lives easier and better. As our electronic devices become more and more connected, powerful, and miniaturized, a wide range of new capabilities have been opened up to us both as consumers and makers. Part of capitalizing on the growth in technology is making it accessible to everyone, no matter their skill level. This has led to the evolution of the field of Interface Design. This project explores one of the most natural interfaces available to humans, natural language, and how we can apply it to realize a dream born in the early 20th century: the “smart home of the future”. A technologically advanced home that is not easy to use is not very useful; the goal of this project is to both explore and prototype a system that allows a person to interface with “smart” home components like lighting and security by simply speaking to some sort of intermediary (akin to Apple’s Siri voice assistant). This project serves to demonstrate a natural language interface we’ve developed that is robust enough that it doesn’t take a great deal of effort to use; no memorization of acceptable phrasing, some sort of “dictionary”, or anything like that is required; simple conversation can be used to simulate minor household tasks like turning on lights or locking doors using instructions relatable to those that someone would give to another person.

37. Smartphone Touch Gestures

*Mario Andhika, Steven Case,
Department of Computer Science*

Touch gestures are underused on smartphones. So much more could have been done with them. They give the practicality of being able to perform actions without having to look at the user’s phone. Voice commands are capable of giving the user that ability, but not silently. Touch gestures complement voice commands by allowing the user to do those actions silently. One such particular application is allowing the user to draw gestures on their smartphones’

lockscreen. This project is an Android lockscreen replacement project that intends to utilize gestures more. With this lockscreen, the user can draw user-customized gestures to do actions while in the lockscreen. This is intended to be a complete lockscreen with shortcuts and widget support, on top of gesture support.

38. Design for Interior Temperature Regulation System for Stationary Vehicles

*Jon Kelly, Elias Argaw, Anthony Simpson,
Bhuvaneswari Ramachandran*

Department of Electrical & Computer Engineering - OUR Funded
Current vehicle cabin interior cooling systems are designed to be overpowered, and they also require the engine to be running, which consumes fuel. While this method works for when the vehicle is operational, there is not a current method at attempting to keep the cabin’s temperature closer to the ambient outside temperature. Our project will implement a Peltier cooling system, as opposed to the traditional A/C compressor system, to prevent a vehicle’s interior from excessive heat. It will incorporate a micro-controller to monitor the temperature inside and outside of the vehicle, and adjust the power to the cooling system automatically. A wireless option to increase power to the cooling system will also be implemented. The primary sources of power will be a solar panel and a 12V lead acid rechargeable battery. The system is designed to be low maintenance and near automatic in operation.

39. Design of a Machine Learning System for Sign Language Recognition

*Michael Parlato, William Mackie, Mohamed Khabou
Department of Electrical & Computer Engineering*

Gesture recognition is an area of computer vision to which much research has been dedicated. Generally, previous attempts have been successful in achieving high accuracy with a data glove or strict limitations on the environment. It is the goal of this project to increase the number of recognizable gestures without any such glove or other hindrance. The end product will be capable of recognizing all twenty-six letters of the alphabet as well as a small vocabulary of other signs from American Sign Language (ASL). The intent is to apply the recognition to the design of an ASL instructional program as well as to real time translation. While ASL makes up the background for this research, the results will be applicable to real time gesture control of many computer applications.”

40. Design of a solar power assisted UAV

*Michael Benbow, Don Coleman, Justin Rumbach,
Xiaojun Geng*

Department of Electrical & Computer Engineering - OUR Funded
The goal of our project is to create a system that will be added to UWF’s new Unmanned Aerial Vehicle to extend its flight endurance. The UAV is an electrically powered

RC plane. The method to achieve this goal will be to add flexible, light weight solar panels to the top of the wings of the aircraft to generate electricity while it is in flight. After covering the wing in solar panels the expected performance increase will be a gain of 25% of the original flight time without a significant increase in weight to the UAV. The system will also be capable of recharging the battery when excess power is being generated, and prevent back flow when the solar panels are not generating enough power (ie a cloud passes over).

41. Design of a Vertical Axis Wind Turbine

*Brett Haymans, Derek Jeter, Christopher Ratliff,
Bhuvaneswari Ramachandran*

Department of Electrical & Computer Engineering - OUR Funded
Wind generated power has become increasingly relevant in recent years due to rising environmental and economic concerns. A resolution to wind generated power for relatively low-wind receiving areas is now a possibility. Our project is to design and implement a vertical-axis wind turbine to deliver standard three phase AC voltage for consumer use. Our VAWT will incorporate an automatic start-up feature for conditions where wind is extremely low as well as a breaking mechanism for stopping the turbine in dangerously high wind conditions. The VAWT will be completely self-sustained in that it will use its own generated power to charge its batteries needed for the automatic starting feature.

42. Modern Drone Warfare: An Ethical Analysis

Joshua Olson, Muhammad Rashid

Department of Electrical & Computer Engineering - OUR Funded
The revelation of drone warfare presents an onslaught of new and never-before considered ethical issues. These aircraft are the equivalent of the robotic armies discussed in so many science fiction novels. While indeed drones do a great justice by protecting the lives of our countrymen and preventing the unnecessary loss of thousands of soldiers’ lives, the long-term impact of this approach is not yet well understood. Popular culture uses terms like “Convenient Killing”, “Death by Remote Control”, “Play-Station Mentality”, and “Death Machine” to describe these drones. This very much describes some of the issues surrounding this technology. Drones simplify the time and effort required for effective military operations, and remove the soldier from the reality of the situation. With the ever-changing defense technology industry, our policies and strategies need to progress correspondingly, and so far, they have not.

43. Unmanned Proximity Tracking Device

*Christopher Mason, Ryan Hope, Peter Rappold,
Mohamed A. Khabou*

Department of Electrical & Computer Engineering - OUR Funded
The UPTD or Unmanned Proximity Tracking Device is a small drone in the form of a quadcopter that is capable of tracking a predetermined target. Drone technology is growing more and more popular among government agencies and militaries around the world to perform surveillance type missions. Drone technology is relatively new to the private sector and civilian world. Civilian uses for the UPTD technology include any situation in which the user desires a birds-eye view of activities that are taking place below. For instance, an athlete that is playing a sport can program the quadcopter to track themselves and the quadcopter will do so from the air at a predetermined distance. This is merely one instance that the civilian sector will have for the UPTD. The UPTD can provide endless possibilities to any person or company desiring a small drone capable of tracking and filming its intended target. The UPTD will identify a predetermined color that the target is marked with using image processing techniques. The program executing the image processing will draw a bounding box around the “color blob” being tracked and compute the centroid of the blob. The coordinates of the centroid will be passed to a series of algorithms that will then compute a unique signal. This signal is then sent to the quadcopter to control the quadcopter’s flight so that the centroid of the object being tracked remains in front of the quadcopter at all times.”

44. “Brown eyes, so brown as to be black”: Attempts at Understanding “the Subaltern” in J.M. Coetzee’s Waiting for the Barbarians

Rebecca Cleary, David Baulch, Robin Blyn

Department of English and World Languages - Honors Thesis
After reading J.M. Coetzee’s novella *Waiting for the Barbarians*, I decided to write my thesis about an issue that has concerned many critics of the novella: the idea that “non-confession [is] part of a deliberate plan” (Alsop 96). This “non-confession”, as many have identified, is the issue with withholding heroines such as the barbarian girl (Alsop 84-6, 89, 102; Alsop 96; Marais 65-75; Wenzel 64-71). To solve this problem, some critics, such as Elizabeth Alsop, have turned to the work of Gayatri Chakravorty Spivak (Alsop 97). To address this issue, I will also use Spivak’s seminal essay, “Can the Subaltern Speak?” in my analysis of the barbarian girl, as I agree with Alsop’s statement that this work focuses on the historically muted subject of the subaltern woman (Alsop 97; Marais 65-75; Spivak qtd. in Alsop 97; Wenzel 64-71). In doing so, I hope to find “agency” (Marais 65) that is not a result of the tortured barbarian girl [who] offers

a way out of the magistrate's struggles with his relation to both language and power (Wenzel 65).

45. Pulp Studies I: Pulp pedagogy: Active learning and Active Reading in the Pulps.

Lauren Gibson, Rachel Johnson, Emily Sisler, David Earle
Department of English and World Languages - OUR Funded
Lauren Gibson's paper entitled "I Confess': Pulps and the Audience's Populist Voice" focuses on George Delacort's "I Confess" magazine. This was the first confessional pulp, inspired by Bernarr MacFadden's True Story magazines. This pervasive genre allowed and encouraged participation from less educated female writers and readers, hence allowing women in a formerly subjugated position to have a voice in the literary world. This dynamic exemplifies how pulp literature was dictated and created by its audience. Emily Sisler's paper "Filling the Void: Pulps, Movies and Censorship in the 1930's" suggests that movies and pulps were intrinsically intertwined in the competition for the scarce money of the depression-era working class, yet both industries were endangered by moral and political leaders inhibiting individual's rights. Sisler argues that the pulps' thematic gesture into the sadistic corresponds directly and immediately to social trends in film and is symbolic of the ongoing popular discourse over the role of moral sanctity in United States politics. Rachel Johnson's "Behind the Curtain': Women and the Science Fiction Pulps" will show that even though the majority of scholarship suggests women were absent during the foundational years of the science fiction pulps, women were present as readers, editors, and writers. Contrary to popular belief, early women writers did not attempt to hide their genders or publish works under male pseudonyms. The scholarly neglect of the pulps is not only erasing the importance of a popular working-class literary form, but also creating a fictitious rewrite of literary history."

46. An Assessment of Water Quality Trends in the Pensacola Bay System

Claire Shipman, Matthew Schwartz,
Department of Environmental Studies
The National Park Service, in collaboration with the University of West Florida, has led a continuous water quality monitoring effort at three study sites in the Pensacola Bay System since February 2010 and continuing in the present. The three study locations include two sites in Santa Rosa Sound (Gulf Breeze) - Naval Live Oaks and Big Sabine, and one site in Southwest Pensacola Spanish Cove Big Lagoon. The water quality assessment includes the following lab analyses: biological oxygen demand, carbonaceous biological oxygen demand, total nitrite, total nitrate + nitrite, ammonia, total kjeldahl nitrogen, total phosphorous, total organic carbon, dissolved nitrate + nitrite, dissolved nitrite, ortho-phosphate, dissolved organic carbon, and chloro-

phyll-a. These analyses are performed every two weeks in the warm months (April- September) and monthly in the cold months (October- March). A YSI data sonde 6600 V2 is deployed in the field at the study sites that takes the following measurements in 15-minute intervals: water temperature, pH, specific conductivity, depth, turbidity, and optical dissolved oxygen. The purpose of this study is to compile all of the existing data and assess any trends (such as diurnal, monthly, seasonal, annual, etc.). The results are expected to show seasonal and tidal patterns for the nutrient suite and water temperature. Specifically, tidal influences are expected to affect specific conductivity as salty water enters from the Gulf of Mexico. Turbidity fluctuations are anticipated following rain events.

47. Assessing Environmental Impacts Through LiDAR Remote Sensing

Courtney Richards, Zhiyong Hu
Department of Environmental Studies - OUR Funded
LIDAR (Light Detection and Ranging) is an optical remote sensing technology that can measure the distance to, or other properties of a target by illuminating the target with light, often using pulses from a laser. LIDAR technology has applications in archeology, geosciences, environmental science, and civil engineering. LIDAR clearly finds a broad range of environmental applications, in which detailed representations of terrain provided by high density LIDAR point cloud data will open new avenues of inquiry not practical with coarser data. Recently LIDAR data have also been used to study forest structure, biomass mapping and carbon storage calculation. LIDAR data permit reliable separation of vegetation from terrain a capability unique among competing remote sensing instruments. In this project LIDAR data covering the UWF campus from NOAA Coastal Service Data Center was used to calculate canopy height and biomass for forested wetlands. The lasers were used to configure tree height, diameter at breast height, and crown size. Biomass can be calculated with the complex laser components of LIDAR. After an additional sweep of the area the canopy biomass will give an indication of tree growth and vigor, which can also be used to calculate carbon storage. Biomass mapping and quantification are of theoretical and practical importance in environmental studies. This project presented a 3D reconstruction technique for estimating above-ground biomass using airborne LIDAR. In the future, biomass changes will be tracked in order to assess the impacts UWF's master plan will have on the surrounding wetlands.

48. Assessing nutrient and physical environmental controls on *Karenia brevis* growth in laboratory cultures.

Jennifer Houts, Matthew Schwartz,
Department of Environmental Studies - OUR Funded
Current knowledge of the creation and sustainability of Harmful algal bloom (HAB) causing dinoflagellate Kar-

enia Brevis (*K. Brevis*), nutrient and physical demands are unknown. Through a series of monocultures, a variety of nutrient concentrations, speciations, nitrogen to phosphorus ratios were adjusted to attempt to understand the ideal growth conditions for *K. Brevis*. Using filtered and autoclaved Pensacola bay water, base nutrient loads were altered as a growth medium. *K. Brevis* growth was determined over a five day incubation using a fluorometer for chlorophyll a analysis. We assessed nutrients before and after with a spectrophotometer for nitrate, nitrite, phosphorus and ammonium and then compared to growth rates to determine nutrient demands.

49. Assessment of Water Quality and Chemistry within Carpenters Creek, an Urban Stream

Heather Policicchio, Matthew Schwartz
Department of Environmental Studies - SCAC Funded
Carpenters Creek is a Class III freshwater stream located in Pensacola, FL. It appears on the verified list of impaired water bodies for the Pensacola Bay Basin and is a tributary to the Pensacola Bay System. Located in an urban area, the creek is subject to nutrient loading from municipal and residential storm water runoff. Previous studies have shown elevated concentrations of lead, barium, chromium, herbicides and pesticides within the creek water. A water quality analysis was conducted to determine current levels of dissolved oxygen, chlorophyll a, nitrite, nitrate, ammonium and phosphorus. By conducting a yearlong study, the water chemistry's seasonal variability was evaluated. Highlighted meteorological influences include temperature, precipitation observed prior to a sampling event, and tropical events such as Hurricane Isaac. Sampling of five study sites began in February of 2012 and concluded in February 2013. Water chemistry results from this study provide baseline data for a study on spatial and seasonal variability of benthic nitrogen cycling within Carpenters Creek and the estuary into which it discharges, Bayou Texar.

50. Effects of Mob Grazing on Selected Soil Properties

Sydney Poulos Haynes, Johan Liebens
Department of Environmental Studies - OUR Funded
Mob grazing is a new, holistic farming procedure in which a large number of animals are moved to a new, small paddock daily. With a very dense number of animals in a small paddock, the livestock are less selective in food choice. This makes for more efficient forage usage. Mob grazing has also been found to promote plant diversity due to the extended rest periods of the paddocks. Little research has been conducted on the changes in soil quality resulting from mob grazing. Our study will examine and identify the changes in soil quality at Green Acres Farm in Northern Escambia County. We will compare soil quality under mob grazed and fallow farm land by measuring infiltration rate, bulk density, CO₂, and

worm counts. All samples taken were taken in triplicates to reduce the margin of error. The infiltration rate of the soil was measured in the field with an infiltrometer. Bulk density was measured with the U.S.D.A. core method. CO₂ content was measured in the field with respiration chambers and draeger tubes and worm count was done manually in the field as well. Being the third year of data collection at Green Acres farm, our soil quality analysis will provide initial indications of the progression of the quality of the mob grazed soil over time. The findings of this mob grazing study have the potential to increase knowledge of the scientific and agricultural communities about environmental benefits of alternative grazing practices.

51. Web GIS Campus Map Development

Aaron Craker, Nathan McKinney
Department of Environmental Studies
Web GIS (Geographic Information Systems) is a powerful tool that allows anyone that has an internet connection to view, search and interact with geographic information. The advantages of a web GIS are its ability to create, manage and distribute GIS services to a wide variety of platforms. In this project we describe the development of an interactive Web GIS map of the University of West Florida. A basemap of campus was authored using ArcGIS Desktop from CADfiles, publicly available data and data collected by GPS. Using ArcGIS Server and ArcGIS-Viewer for Flex we developed a Flash based web application that allows the user to view the campus basemap and interact with several layers including buildings, parking lots, emergency blue lights and trails. This application includes the development of a search function allowing for interactive searching of buildings and parking lots. The idea behind the development of this map is so that future projects can be added to the map, and data layers collected on campus can be easily shared with anyone through a web browser.

52. Effects of Mob Grazing on Selected Soil Properties

Alexia Grier, Sydney Poulos Haynes, Johan Liebens
Department of Environmental Studies - OUR Funded
Mob grazing is an efficient way to fertilize land for farming. This innovative method of farming allows livestock to graze in a small area and to be rotated daily. The livestock churn the minerals in the soil, which acts as a natural cultivation system. This study will be used to determine the effects mob grazing has on soil quality. Little research has been done to show the effects mob grazing has on long term soil quality. Mob grazing has been implemented for four years at Green Acres Farm in Northern Escambia County, FL. At the farm, triplicate samples were taken at four different sites, two sites that have been mob grazed and two fallow sites. The samples will be used to test organic matter, aggregate stability, and pH. Organic

matter will be tested using the Walkley-Black method, aggregate stability will be tested with a standard USDA method and pH with a standard EPA method. This study will determine the effects of mob grazing on soil quality by comparing our results for mob grazed sites with results from previous years and by comparing results for mob grazed sites with those for fallow sites. Mob grazing has the potential to improve soil quality. Having scientific data for this alternative grazing method that may enrich the soil could allow farmers to avoid chemicals that lead to detrimental environmental issues.

53. Spatial and Temporal Variability of *Karenia Brevis* within the Choctawhatchee Bay System

Claire Lacey, Matthew Schwartz,

Department of Environmental Studies - SCAC Funded

This study explored the spatial and temporal variability of the red tide organism *Karenia brevis* within the Choctawhatchee Bay System in northwest Florida. This area has previously experienced red tides caused by blooms of the toxic dinoflagellate *K. brevis* which resulted in massive fish and dolphin kills. Water samples were collected at monthly intervals for the past five years, at six shore stations in two bayous in western Choctawhatchee Bay. Polymerase chain reaction (PCR) will be used to determine *K. brevis* concentrations within these Choctawhatchee Bay bayous. Surface water nutrient levels and chlorophyll *a* were measured in all samples along with standard physical water characteristics (DO, temperature, and salinity) to provide relevant biogeochemical framework to assess the observed spatial and temporal variability in *K. brevis*. The results will be evaluated for spatial and temporal correlation in order to expose potential causes for the periodic blooms, including nutrient loading from surface and subsurface fluxes.

54. Spatial Simulation Modeling with SLEUTH

Courtney Richards, Zhiyong Hu,

Department of Environmental Studies

Increased population growth and rapid urbanization with the related urban sprawl, creates many issues for planners. In order to help mitigate environmental factors and to meet planning needs spatial simulation models were created and continue to be more used widely in multiple fields. During the spring 2013 semester, the urban growth model, SLEUTH, was used in order to predict future land use growth based on past urban expansion. The model was developed by Keith C. Clarke and research is still conducted under the Geography Department of the University of California, Santa Barbara. The name SLEUTH is an acronym that stands for Slope, Land Cover, Exclusion, Urbanization, Transportation, and Hillshade; all these items are the image inputs requirements needed to run the model. The area of study was Charlotte, North Carolina and imagery acquisition took place from the

Multi-Resolution Land Characteristics Consortium (MRLC), the U.S. Census, and USGS National Elevation Dataset. In order for the model to ascertain a past growth trend multiple years of land cover maps were used including 1992, 2001, and 2006. The difference between the youngest year and the oldest year determined how far into the future the model can predict; in other words the model predicted urban change for Charlotte, North Carolina for 2020. The model is a C program run under UNIX and Cygwin was used as a command interface with its Bash gnu compiler for calibration.

55. Age-Based Differences in Recalling Political Messages

Zack Campbell, Jenna Emery

Department of Government - OUR Funded

Politicians must make statements regarding news, defend positions, and campaign for election. Understanding the impact of what is said and how it is said may be of great importance. The proposed research could offer an exciting new method for candidates to use to tailor their communications with voters. In theory, candidates can offer messages with similar intent to both young and old, and get both demographics to recall the message by tailoring the tone and prosody. This project builds on the study of political messaging as well as the psychology of age-related differences in memory. Research shows that the young and the old have very different rates of recall depending on the tone and prosody of speech delivery, i.e. the meaning of the words and the sounds used to convey them. The proposed project will determine if these auditory preferences also apply to political messages offered by candidates for office.

56. Causal Factors in the Global Financial Crisis of the 21st Century

Matthew Leight, Michelle Williams

Department of Government

The global financial crisis of the 21st century has had a fundamental impact on economic well-being of individuals and nation states around the world. It has also cast a shadow of doubt and uncertainty over institutions that had previously appeared to be routed in stability and prospective success. My quantitative analysis will take a look at "what went wrong." It will examine the causal factors of the crisis using statistical data/trends. Such analysis will allow the common observer to better understand the complexity behind what has occurred in the Eurozone, America and other regions of the globe.

57. China's air pollution

Megan Morrison, Jessica Hayden

Department of Government

China is one of many countries with an extreme air pollution problem. It is also the most over populated. This is a severe issue because of how many people have been af-

ected by these toxins through reports of cancer, breathing problems and other illnesses. It is not only in the air but also in the water and canals from sewage waste. As many can point fingers to who is responsible, the real concern is how do we fix it. This research is still a work in progress but with researching scholarly articles as well as interviewing citizens living there, there are various opinions on who is to blame and what can be done to change it. I was persuaded to research this issue after completing my foreign exchange program there last year and noticing the imminent difference in the quality of clean air among the more populated cities.

58. Conscription with a Comma, Controversial Caveats Surrounding Israel's Defense Service Law

Peter Goldsberry, Jessica Hayden

Department of Government

The Israeli Defense Service Law mandates that all Israeli citizens serve in the military for a specific length of time, however there are many ways in which an Israeli citizen may opt out of, or be exempted from service. With the number of citizens actually being conscripted hovering near 50%, is it time for Israel to change the law in order to include more participation, do away with the law altogether, or leave it alone? There are some questions that must be addressed in order to justify what action should be taken. What are the exemptions and opt out criteria? Is there support for the law to be maintained, or support for the law to be changed? Would changing the law to be more inclusive help or hurt the strength of the service? With the modern weaponry that the IDF has, is there a need for continued conscription requirements? How does the law affect the culture in Israel? The answers will lead to the conclusion that while there are flaws in the law, conscription is still a valid concept in the Israeli culture, and aside from doing away with some of the exemptions that allow certain people to opt out, the law is functional and is an integral part of Israeli culture.

59. Correlation Between Poverty and Population Growth in America

Rocio Tia, Jenna Emery

Department of Government

Modern Political Science research holds the belief that more population is equivalent to more economic development due to an increased need for goods resulting in more jobs created in industries that will fulfill these needs. However, this study examines data collected by the U.S. Census Bureau over six decades to test the hypothesis that more population results in more college attendees and the jobs created are low income industry jobs, a correlation which results in debt-filled college graduates settling for lower-paying jobs due to increased competition for professional jobs and wider availability of the lower-paying jobs. This study is careful to pay

particular attention to the percentage of population in poverty as opposed to the number of people in poverty this is because of the common error that more people equates to more "rich people" and more "poor people" in general. The hypothesis proved to be correct; as population increases so does the percentage of poverty in that population.

60. Costs and Benefits Analysis of the Arab Spring

John Macdonell, Michelle Williams

Department of Government

This project will examine, through use of quantitative analysis, the costs and benefits of the Arab Spring revolts and democratization movements across the Middle East and North Africa. Areas of focus include gross domestic products and immigration rates of the affected nations, and the overall economic impact on the region, both before and after the uprisings.

61. Germany: The Immigration Conflict

Andrew Bittner, Jessica Hayden,

Department of Government

In post-war Germany there was a huge demand for cheap labor because of the Berlin wall separation. The West Germans were considering opening their borders to Turkey, but some politicians were against the idea. They thought that there would be a cultural gap between the immigrants and Germany. Even though there was an opposition of opening the borders, there was pressure by the United States of America that demanded West Germany to open their borders. The Turks filled these low waged jobs while living temporarily in Germany. Thousands of Turks came over and in the end the side that wanted to keep the borders closed were right. Once the Berlin wall fell, the unification of East and West Germany was in effect. At the same time the wall fell, there were 1,612,632 Turkish immigrants in the country. The Turks didn't want to go home because Turkey was in a bad economic state; so there were debates of giving these Turks citizenship. These debates started hatred against immigrants by the Eastern Germans called xenophobia. There was discrimination of the Turks and hate crimes started to happen. The conflict between the Germans and the Turks is still going on today, but the Turks are starting to become the majority in Germany because of a baby boom. Without drastic measures of trying to resolve the differences of each culture, there will be retaliation between the two groups.

62. Global Water Scarcity; Political, Economic, and Geographic Implications

Steven Salter, Leo Weeks

Department of Government

Each day Americans drive to and from work carefully observing the price of gasoline displayed on the sign of

their local convenience store. In the near future, we may have the same attentiveness to the price of water. Water is the essence of life on our planet. For over one billion people the scarcity of clean water is a stark reality. As the world's population increases, the number of persons without adequate water is certain to climb. This project will examine the different aspects for the problem of water scarcity. For some areas, it is clearly a geographic or location problem. In many poor countries, water may be abundant. However, due to economics, clean water is at a shortage. Water, like other resources, is not immune to political manipulation both here in the United States and the world abroad. Finally, I will explore the ethical questions of water scarcity. Is water a commodity or a natural right? Unless we examine and force action on the issue of water scarcity the water problem will not be limited to the Third World and will indeed be on a global scale.

63. Iceland's fall in government

Everett Ellis, Jessica Hayden

Department of Government

The collapse of the Icelandic financial system stems out with regards to the European Union. Not only were Iceland's main banks (Glitnir, Landsbanki, and Kaupthing) being depreciated exponentially, other countries who had invested their money into these banks had been the back bone of these financial establishments. This collapse leads to the extraction of all foreign country money as well as their currency plummet and inflation swell in Iceland. The currency withdrawal from these foreign nations from Iceland's banks happened simply because they did not have these other countries money, thus other countries are being deprived of the money that was also keeping their country running smoothly. Serious conferences were being held to either conform to a National Unity Government or a Government of the SDA and the Left-Greens. These ideas would lead to a decrease in the European Nations recession. I learned that there are many different ways and loopholes to the financial system of the EU. European economic recovery plan (created by José Manuel Barroso) could recover their government and steer away from recession or even a larger depression. With research, there are many ways to avoiding a recession in Iceland without utilizing the EU as essentially a back bone.

64. India Government and Public Health

Quincie Doucet-Barron, Jessica Hayden

Department of Government

My research will go into an in depth analysis of the Indian government and its public health system. As it stands, India is on the lower half of the spectrum in the world when it comes to issue of public health. The Indian government has made their fair share of feeble attempts

at trying to put a band aide on the problem. My research consists of the little development that India has gone through in fixing a small amount of the problems and also what the government has put in place in attempt to improve the problems. Through my research I will also suggest some options that might improve the public health system of India.

65. Influences on Peru's People and Government

Taltha Motter, Jessica Hayden

Department of Government

In modern day Peru one can see the effects of colonization in all aspects of life. The Spanish heritage has spread into the government, the people and the way of life. The Peruvian government is similar to the Spanish with having a governing head and the prime minister. In Peru, there is a President as the governing head unlike Spain where the king is head, but the set ups are the same with a head of state and a prime minister plus a legislative congress. Spain brought the Spanish language, Catholicism, and a more European style of living to the people changing native the way of life in Peru forever. Showing that Spanish colonial occupation help change an entire country into the government and people we see today.

66. On the Fence: U.S. Senate Voting on Immigration Issues

Jennifer Reid, Jocelyn Evans

Department of Government

Due to the number of individuals coming into the U.S. illegally, the topic of immigration has grown increasingly important and is dividing citizens and government officials about what steps should be taken regarding immigration policy. The concern in the U.S. about immigration stems largely from worries related to labor-market competition, assimilation, and crime; with economic issues serving as the major source of apprehension for Americans. In order to understand the voting outcomes for immigration policy during the first term of the Clinton presidency and how senators were previously motivated to cast their votes on immigration policy, it is necessary to determine whether voting on immigration could best be explained by senators' partisan identities or if it could instead be better explained by senators' ideological preferences. This paper examines how Senators voted on immigration policies during the 103rd and 104th Congresses. Legislation concerning immigration is coded as either a conservative or liberal policy and then used to run regressions in order to determine if senator voting on immigration is primarily conducted based on personal preference or party ideology. Due to the results, it is evident that senator votes concerning immigration can be best explained by their ideological preferences. Although current and future senator voting will likely be different from how it was in the past, it can be determined that during the first term of the Clinton presi-

dency, immigration was not a single-issue, which allowed senators to act as trustees and vote based on ideology.

67. The Influence of Federal Research Subsidies on Advancements in Renewable Energy Technology

David Hunter, Bill Tankersley

Department of Government

The recent bankruptcies of companies such as Solyndra have placed a public spotlight on federal funds subsidizing commercial research and development, specifically in the area of renewable energy. Some would argue that threats of climate change create an urgent need for new energy technologies that cannot be met by private industry funding alone. However, others would argue that, at best, government subsidies create incentives for companies to focus on requests for grants and proposal writing rather than on research and development. At worst, subsidies devolve into a form of political cronyism, used as spoils by politicians in power to reward corporate allies. The goal of this study is to measure the influence of federal subsidies on advancements in renewable energy technology. Technology advancement is quantified by the number of patents generated and improvements in power generation efficiency (in kilowatts/hour). Subsidy levels are based on appropriations to the Department of Energy (DoE) reported annually by the Congressional Budget Office (CBO). In 2009, as part of the American Recovery and Reinvestment Act (ARRA), the DoE received a substantial increase in appropriations to support energy technology. The dollars received in 2009 for this purpose were almost ten times the average annual dollars received in all other years between 1998 and 2012. A corresponding advancement in renewable energy technology should also have occurred if these subsidies are a good investment.

68. The Space in Our Hearts: How do local governments decide to memorialize tragedy

Matthew Groff, Jenna Emery

Department of Government

My research is about memorials constructed at school shooting sites since 1991. It is different from previous research because prior focus has been on the causes of the shooting and its sociological effects on victims and their families. My research has focused on local decision-making in the aftermath of the tragedy. A database was constructed to analyze all incidents of mass school shootings reported by the media from 1991 to the present. Types of media coverage and local indicators concerning wealth and gun ownership were used to distinguish between types of memorials. From my research, I conclude two things: More local wealth leads to more expensive memorials and more access to local decision-making leads to more public satisfaction with the memorial.

69. The Women's Movement In Turkey

Evelyn Van Derbeck, Jessica Hayden

Department of Government

The research in which I am going to be submitting a report on, is the issue of women's rights and the women's suffrage movement in Turkey. Women in Turkey have been fighting for their rights and there is still a major problem with women's equality rights as of today. This research, is my research on other articles and authors/scholars work, who have previously studied this problem and have published papers and articles on the subject. The research I shall be reviewing at the symposium is not a highly talked about problem in the country of Turkey. Not many have addressed it, and especially in America, many are unaware that this problem is even occurring. Two sources that are used is the Conditions and Rights By Gender and Women's Studies Programme Middle East Technical University, and Is The Practice of Equal Opportunities Management Keeping Pace With Theory? Management of Sex Equality in the Financial Services Sector in Britain and Turkey (2000), pp. 43-67. Other sources will be used throughout this research paper. I have concluded that this issue have also be linked to domestic, economical, and international problems that Turkey is facing as of today and in the recent/further past.

70. Tourism and the Kenyan Economy

Taylor Patton, Jessica Hayden

Department of Government

Kenya has the largest economy in Central Africa. The Service Industry, specifically Tourism, is a major part of the Kenyan economy. Tourists are attracted to coastal beaches, the national parks and big game reserves, which are home to many exotic species of animals, as well as villages of indigenous tribes. The tourism economy of Kenya has benefitted Kenya in countless ways. Tourism employs many Kenyans, and has allowed for the protection of natural resources, especially exotic animals, in Kenya that would otherwise be destroyed by poachers, hunters, or indigenous people. While tourism is usually a steady source of income for the country, election years tend to foster violence which in turn keeps people from visiting in high numbers. The tourism industry has also been detrimental to the Kenyan peoples in some ways. The many indigenous tribes are pushed to less favorable land and forbidden to kill any wild animals which pester their villages and kill their domesticated animals. Their cultures are being watered-down as the youth are exposed to tourists that come into their villages. Tourism greatly contributes to the GDP of Kenya, but also has several drawbacks and is not always reliable, especially in times of political turmoil.

71. Women's Immigration Trends

*Nicole Clyatt, Jenna Emery, Michelle Williams
Department of Government*

My research is on women's immigration trends. It is different from other types of topics due to amount of data I will produce of the leading causes and the top locations women immigrate. My research uses quantitative data as the source of displayed information. From my research I conclude safety and the United States of America is the leading reason and location women immigrate.

72. World Immigration Trends Effecting the US

*Danielle Mash, Michelle Williams
Department of Government*

My research is about world immigration trends and their effect on the US economy. It is different from previous research because I will present evidence of positive outcomes on technological growth, industry and the "world economy". I will apply quantitative (statistical methods) to examine this correlation. From my research I conclude that immigration is beneficial to revive and bolster the US economy.

73. Effects of a Mentorship Program and Peer-Assisted Learning in an Undergraduate Limited Access Program

*Caitlin Arzaga, Christopher Dake
Department of Health, Leisure & Exercise - Honors Thesis*

The purpose of this thesis is to study the effects of a mentorship program and peer-assisted learning in undergraduate limited access programs. This program was implemented within the Athletic Training Education Program (ATEP) last spring in order to guide the sophomore class through prerequisite classes and the rigorous application process. The program also provided the opportunity for junior AT (Athletic Training) students to gain exposure to public speaking and other professional development skills. The outcome of this program on the novices (sophomores) as well as the mentors (juniors) will be analyzed using a Lykert scale survey. This survey is based on the Athletic Training Peer-Assisted Learning Assessment Survey that was created by Jolene Henning for use in her research study entitled Peer-Assisted Learning in the Athletic Training Clinical Setting. This survey will measure the perceived relevance and practical assistance that the program provided to both the mentors and the novices. The survey will also contain a free response section for students to provide subjective information. Results from similar studies done on a larger scale will also be included. These research studies show the relevance of this topic and the growing popularity of peer-assisted learning as a teaching method, particularly in limited access medical programs. Studies have found that there is quantifiable evidence of

peer-assisted learning and mentorship programs having a positive effect on confidence levels and academic performance of students in the Athletic Training clinical settings as well as nursing and medical programs.

74. How to Avoid the Cold Shoulder: A Stage-Based Approach to Frozen Shoulder Syndrome

*Keeli Tritz, Scott Morrison,
Department of Health, Leisure & Exercise - Honors Thesis*

The goal of this literary research is to find a way to make the treatment of frozen shoulder syndrome (FSS) a less intimidating and more manageable task. This paper attempts to provide a basic explanation of the underlying processes regarding the progression of both general scar formation, and that of FSS. With this groundwork laid, a comparison will be drawn between the more understood former category, and the more problematic second one, to allow the reader a better understanding of what they are up against when attempting to treat a patient with FSS. By showing that each stage of FSS can be loosely equated with the stages of scar formation, we can apply understood concepts of scar treatment to create safe parameters to treat and research within. These parameters will allow us to ethically and effectively treat patients, while broadening our knowledge of what treatments are most effective based on the stage of healing the patient is currently in.

75. Measuring the Participant Spending of the Gulf Coast Half Marathon and its Economic Impact on the Pensacola Community

*James Sherrill, Anthony Beck, Chase Lambert,
Shelbie Hurst, Charlie Song
Department of Health, Leisure & Exercise - OUR Funded*

The research is being conducted in conjunction with the Pensacola Sports Association (PSA). The research project focuses on the early stages of Mullin's (2000) model, which includes the core of a successful sport marketing strategy, to conduct research into the "market and product idea, understanding the sport consumer, and conducting market research. Three major components are included in this research: (1) go into the field and conduct survey research at the Gulf Coast Half Marathon that is sponsored/co-hosted by the PSA; (2) statistical analyses of surveyed data; and (3) measure the economic impacts of the Gulf Coast Half Marathon on the Pensacola community using Mullin's model as a theoretical framework. Through analyzing the data the research report will include an event's participants' demographic and spending profile to calculate its economic impact on the Pensacola community, as well as an analysis of PSA's marketing strategy effectiveness to attract sporting events to the Pensacola area.

76. Measuring the Participants Spending of Double Bridge Run and Its Economic Impact to Pensacola Community

*Courteney Mincy, James Stephens,
Kristina Hatmaker, Maggie McDonald,
Jonathan Barrow, Julianne Gaubron,
Matthew Rodriguez, Ryan Elliot, Charlie Song
Department of Health, Leisure & Exercise - OUR Funded*

The research is being conducted in conjunction with the Pensacola Sports Association (PSA). The research project focuses on the early stages of Mullin's (2000) model, which includes the core of a successful sport marketing strategy, to conduct research into the "market and product idea, understanding the sport consumer, and conducting market research. Three major components are included in this research: (1) go into the field and conduct survey research at Hilton Gulf Front Hotel that is sponsored/co-hosted by the PSA; (2) statistical analyses of surveyed data; and (3) measure the economic impacts of the Double Bridge Run on the Pensacola community using Mullin's model as a theoretical framework. Through analyzing the data the research report will include an event's participants' demographic and spending profile to calculate its economic impact on the Pensacola community, as well as an analysis of PSA's marketing strategy effectiveness to attract sporting events to the Pensacola area.

77. Measuring the Participants Spending of Wheel Chair Tennis and Its Economic Impact to Pensacola Community

*Matthew Garvin, Kristin Thomas, Nicole Davis,
Emily Rhoden, Charlies Song
Department of Health, Leisure & Exercise - OUR Funded*

The research is being conducted in conjunction with the Pensacola Sports Association (PSA). The research project focuses on the early stages of Mullin's (2000) model, which includes the core of a successful sport marketing strategy, to conduct research into the "market and product idea, understanding the sport consumer, and conducting market research. Three major components are included in this research: (1) go into the field and conduct survey research at Roger Scott Sports Complex that is sponsored/co-hosted by the PSA; (2) statistical analyses of surveyed data; and (3) measure the economic impacts of Wheel Chair Tennis on the Pensacola community using Mullin's model as a theoretical framework. Through analyzing the data the research report will include an event's participants' demographic and spending profile to calculate its economic impact on the Pensacola community, as well as an analysis of PSA's marketing strategy effectiveness to attract sporting events to the Pensacola area.

78. Social and economic correlates of rates of abortion in the Russian Federation and the United States

*K'yone Zenobia Johnson, F. Stephen Bridges, Karla A. Caillouet
Department of Health, Leisure & Exercise*

Social and economic conditions can affect health status in a many different ways. Depending on the quantity and quality of these conditions improvement or deterioration in health status can occur. In the 1990s middle-class Russians were pushed below the poverty level. American men and women have faced these same challenges albeit more recently in the 2000s. The present study explored the relationship between social and economic variables and several indices of abortion. The variables were divorce, rates of contraceptive prevalence, number of OB/GYNs, health expenditure per capita, female unemployment, and gross domestic product per capita. The indices of abortion were the numbers, rates and ratios of abortion for women aged 15-49 years and for women of all ages, respectively, in both countries for each year from 1990 to 2009. Statistical techniques included partial r correlational analysis and multiple linear regression. The study controlled for any effects of gross domestic product per capita on possible associations among variables. Despite vast differences in the countries regarding abortion, as a measure of female health status, both stand to benefit from improvements in the social, economic, and health care systems. Implications for future research included increasing the availability of contraceptives, especially for women, in both countries.

79. Sports Marketing Research: Gulf Coast Winter Horse Show

*Eric O Westervelt, Burr Miller, Elio Latella,
Chance Buskey, Michaelangelo Alverina, Jessica Hsu,
Charlie Song
Department of Health, Leisure & Exercise - OUR Funded*

The research is being conducted in conjunction with the Pensacola Sports Association (PSA). The research project focuses on the early stages of Mullin's (2000) model, which includes the core of a successful sport marketing strategy, to conduct research into the market and product idea, understanding the sport consumer, and conducting market research. Three major components are included in this research: (1) go into the field and conduct survey research at the Gulf Coast Winter Horse Show that is sponsored/co-hosted by the PSA; (2) statistical analyses of surveyed data; and (3) measure the economic impacts of the Gulf Coast Winter Horse Show on the Pensacola community using Mullin's model as a theoretical framework. Through analyzing the data the research report will include an event's participants' demographic and spending profile to calculate its economic impact on the Pensacola community, as well as an analysis of PSA's marketing strategy effectiveness to attract sporting events to the Pensacola area.

80. The Building and Design of a Restaurant

Jordan Moss, Xuan Tran

Department of Health, Leisure & Exercise - SCAC Funded Honors Thesis

Throughout history, restaurants have been one of the most popular forms of socialization. Today, interior design's importance in defining the dining experience is rising (Leahy, 2006). People want to come to restaurants that provide them with a unique experience, and one of the best ways to give that to a customer is through design. It has been said that while there are many elements that go into making a restaurant successful, few are as important as a restaurant's design (Lieberman, 2002). In order to illustrate this point, I will design a restaurant from the ground up; this will include everything from building structure to menu to marketing plan. I will then construct a model of my newly designed restaurant. This design will enhance the atmosphere of the restaurant to create a family-friendly environment. Then I will construct a model of my newly designed restaurant. This model will contain all of my design elements, with the goal being, to show the unique qualities that I believe will make my restaurant successful.

81. Orange Beach Soccer Shootout

Thomas Henriques, Brandon Von Achen, Kathy Franklin, Teddy Joseph, Charlie Song

Department of Health, Leisure & Exercise

The research is being conducted in conjunction with the Pensacola Sports Association (PSA). The research project focuses on the early stages of Mullin's (2000) model, which includes the core of a successful sport marketing strategy, to conduct research into the market and product idea, understanding the sport consumer, and conducting market research. Three major components are included in this research: (1) go into the field and conduct survey research at Orange Beach Soccer Shootout that is sponsored/co-hosted by the PSA; (2) statistical analyses of surveyed data; and (3) measure the economic impacts of The Orange Beach Soccer Shootout on the Pensacola community using Mullin's model as a theoretical framework. Through analyzing the data the research report will include an event's participants' demographic and spending profile to calculate its economic impact on the Pensacola community, as well as an analysis of PSA's marketing strategy effectiveness to attract sporting events to the Pensacola area.

82. Measuring the Participants Spending of US Finals Cheer Competition and Its Economic Impact to Pensacola Community

Tyler Moore, Kathryn Williams, Darwin Ignacio, Cary Powe, Charlie Song

Department of Marketing and Economics

The research is being conducted in conjunction with the Pensacola Sports Association (PSA). The research project focuses on the early stages of Mullin's (2000) model,

which includes the core of a successful sport marketing strategy, to conduct research into the market and product idea, understanding the sport consumer, and conducting market research. Three major components are included in this research: (1) go into the field and conduct survey research at US Finals Cheer Competition that is sponsored/co-hosted by the PSA; (2) statistical analyses of surveyed data; and (3) measure the economic impacts of US Finals Cheer Competition on the Pensacola community using Mullin's model as a theoretical framework. Through analyzing the data the research report will include an event's participants' demographic and spending profile to calculate its economic impact on the Pensacola community, as well as an analysis of PSA's marketing strategy effectiveness to attract sporting events to the Pensacola area.

83. Development of B2B Solutions for the Fast Food Restaurants

June Wei, Sumaiya Zabeen

Department of Management & MIS - SCAC Funded

This research is to develop business-to-business solutions for the fast food restaurants. Specifically, an electronic value chain model was developed to show how to apply information technologies and information systems in the fast food restaurant industry. Then, a set of tactical business-to-business solutions were derived based on the developed electronic value chain model. Data analysis was conducted based on data collected from 20 companies in the U.S. The results of this study will benefit decision makers and managers in the fast food restaurants when making decisions on electronic business; and therefore, accelerate the adoption of information technologies and information systems in the fast food restaurant industry.

84. Development of A Cloud-Computing based Home-Schooling Education System

Jordan Valdespino, William Zuhlke, Jun Wei

Department of Management & MIS - OUR Funded

This paper aims at developing an advanced home-schooling education system at a high-school level by using cloud computing technologies. With cloud computing being used more and more in the business environments, it is becoming increasingly important to bring Cloud Computing to the High-School level student. Implementation of cloud computing in public schools however; depends on the grade level, the financial condition of the school system, and the quality of the teachers available. This type of computing experience will ensure that students are able to access the latest versions software, which will give them an advantage at most colleges and universities. Specifically, a data flow model was developed to show how cloud computing can be adopted in home-schooling education. Then, a set of usability

solution items were derived based on breaking down each flow in the data flow model. To support the courses, some functions such as services of teachers to create educational videos on a variety of subjects, a simple form to allow for new students and let the guardians pick the proper method to teach them are provided. The scope of the system will be purely for high school levels (9-12), with material that can be used to prepare for college. After the completion of the 12th grade the customer/student will be adequately prepared for college and have a valid transcript for submission. With the implementation of this system, the guardians of the kids using our system will have complete control of how they teach without outside intervention.

85. Development of a Mobile Graduate Assistant with Usability Features

Chris Jefferies, Dustin Lennon, Chris Boning, Jun Wei

Department of Management & MIS - OUR Funded

The Mobile Graduate Assistant system (mGA system) is a personal assistant system designed to be used on multiple electronic mobile devices for graduating students of University of West Florida or alumni graduates with a degree in the MIS (Management Information Systems) curriculum. The system is designed to operate on Microsoft Windows 2010 operating system using Microsoft Access database software with the interface designed in VB.net. The mGA system will be limited to a 4G, 3G, Wi-Fi network, and/or Hot-Spot Wi-Fi network and is designed for users who have access to touch screen, a keypad, and a minimum of 3.7 in. screen display on their mobile device. The mGA system is designed to operate within a cloud environment applying enhanced security profiles to protect users. With challenging economic conditions on a global scale and employment opportunities a constant concern, this system is developed to provide both graduates and potential employers the capability to work with one another and have continuous updated data relevant for their specific needs during job placement. The mGA system is designed to assist the currently employed as well in offering job advancement opportunities from current positions by reviewing current job postings from potential employers. As technology advances, this system application can broaden to other degrees and user requirements with the potential of enhanced capabilities such as GPS and end user credit accounts for travel purchases during the job search process by forming organizational partnerships to further progress system design and functionality.

86. A Cubic Convergent Method for Real Symmetric Eigenvalue Problems

Zhaoxia Wang (Mary), Kuiyuan Li

Department of Mathematics

In this project, I will present how to use the Laguerre's method to compute some or all eigenvalues of real symmetric eigenvalue problems. The sequence generated by Laguerre's method converges to an eigenvalue cubically and monotonically. The numerical results showed that this approach is better than the Bisection and Newton methods if the eigen values are well separated.

87. Numerical Solutions for the Navier-Stokes equation in Two Dimensional Space

Rebecca Smith, Jia Liu

Department of Mathematics

In this project, we will study the numerical solutions for fluid dynamic systems such as the study of air flow, water flow, etc. We use the finite difference method to discretize the partial differential equations. The models will be in the two dimensional space. The equations subject to this study will include the Navier-Stokes equation and the Stokes equations. Error analysis and residual calculation will play a key role in the solution, to include condition number and will be a main focus in this study. Numerical analysis utilizing MATLAB and Maple software will be performed.

88. Statistical Modeling of Adolescent Risky Behavior and Seatbelt Use

Thapelo Ncube, Justice Mbizo

Department of Mathematics - OUR Funded

In 2009, 1,659 drivers ages 15-17 in the United States were involved in a fatal car crash and about 100 times more were reported to be involved in a crash where there was at least a possible injury (Lyan et al., 2011). My professor and I researched which particular factors increased the risk of driving without a seatbelt. The purpose of the study is to examine the role of risky behavioral factors and texting while driving. Risky behaviors are defined as alcohol consumption, use of illicit drugs, night driving, driving with teenage passengers in car. We used data from the 2009 Youth Behavioral Risk Survey with a total of 16,345 participants. The variables of interest included: grade level of the adolescent, alcohol use, illicit drug use, socio-demographic, and driving with several teenage passengers. Chi-square test results showed that males report higher rates of non-seatbelt use 11.5% than females ($p < 0.001$). There was no significant difference by race or ethnicity ($p < 0.226$). Higher rate of non-seatbelt use was reported among marijuana users (19.6%), cocaine users (41.4%), and heroin users (44.1%). Multivariate logistic regression results show a strong association between the dependent variables and several covariates (gender, wearing a helmet when biking, and passenger of drunk driver, reporting use of alcohol in the last 30 days, marijuana use, cocaine use, methamphetamine use, sniffing glue or pain, and carrying a fire arm.

89. Laser Induced Fluorescence Spectroscopy of a Langmuir Monolayer of C-16 Fluorescent Dipyrri-none Liquid Crystal

Christian Struebing, Rebecca Chandler, Amy Renaud,

Giovanni DeLuca, Aaron Wade,

Chandra Prayaga, Michael Huggins

Department of Physics - OUR Funded

A C-16 Fluorescent Dipyrri-none Liquid Crystal synthesized by the Chemistry department, University of West Florida, has been prepared in a Langmuir monolayer using a Nima

Langmuir-Blodgett Trough. DeLuca et al. studied how the length of the hydrocarbon tail influences the behavior of the pressure-area isotherm of the Langmuir film. The C-16 Fluorescent Dipyrinone Liquid Crystal film produced a stable film at 20 mN/m and a stable, optical quality film at 40 mN/m. We present a study of the fluorescence properties of the C-16 fluorescent dipyrinone liquid crystal film. Once the monolayer is compressed the sample is excited using a 410 nm wavelength laser and the fluorescence is measured using an Oriel MS260i ¼ m Spectrograph.

90. Modeling of Electric Field in a Nonparallel Plate Capacitor.

Nathan Cooper, Josiah Anderson, Laszlo Ujj
Department of Physics - OUR Funded

It is very important to know the electric field distribution inside a molecular solution filled capacitor cell in order to measure the molecular dipole reorientation in an electric field. To do so we will extrapolate information from the exact analytical solution of the electric field in an infinite wedge of conductors. Using the infinite model we will find an approximation of the charge density on the plates and from there we are able to approximate the electric field and potential of our finite nonparallel plate capacitor. The results should reproduce the exact same solution as the infinite model at the center of the cell and give us an approximation of the solution close to the edges of the cell. In order to accomplish this task we will be utilizing various tools including Maple 16 math software. The results will be used in a nonlinear spectroscopy measurement showing the vibration signature changes because of the molecular dipole reorientation.

91. Construction and Characterization of a Nanosecond Nd:YAG Laser Pumped Distributed Feedback Dye Laser Generating Picosecond Pulses

Timothy Clark, Doug Stephen, Chris Weckerly,
Laszlo Ujj

Department of Physics - OUR & SCAC Funded

We have constructed a Distributed Feedback Dye Laser (DFDL) using interferometric pumping. DFDL works according to the dynamic modulation of the gain medium creating short pulses. Shortening of the pulses, stability, and dynamic range of the DFDL were investigated. Pulses were measured with the help of a photodiode with a 30 picosecond response time. Traces were recorded with a Tektronics DSA73304D (33GHz) digital serial analyser. The gain medium contains an ethanol solution of Rhodamine 590 dye and DODCI saturable absorber. Increasing the concentration of DODCI saturable absorber resulted in significant pulse shortening (150 to 54 picoseconds). Single pulse generation was achieved when the power of the pump laser was adjusted 10 percent above the laser threshold. The central wavelength of the laser pulses was 587 nm. The mathematical modeling, optical layout of the DFDL, and the results of the temporal and spectral characterization of the laser are presented on the poster. The develop-

ment of the DFDL will lead to an extensive investigation of short pulse dye lasers for educational purposes and for applications in nonlinear spectroscopy.

92. Dielectric relaxation in liquid crystals 4-Octyl-4-cyanobiphenyl (8-CB) and C-16 fluorescent dipyrinone

Andrey A. Kondrat'yev, Chloe Renfroe, Aaron Wade,
Chandra Prayaga

Department of Physics - OUR Funded

This paper reports the study of the dielectric relaxation time of the liquid crystal 4'-Octyl-4-cyanobiphenyl (8-CB) in the smectic, nematic, and isotropic phases. The time constant of the decay was studied using a 10 mV square wave input signal. Large changes in the relaxation time were observed near the phase transitions. 8-CB was injected into a commercially available liquid crystal capacitor cell to act as a dielectric. The cell was housed in a temperature controlled environment constructed in the lab and an RC circuit was assembled using the 8-CB capacitor. The temperature of the capacitor was varied over the range 25pC to 43pC, covering all three phases. The sample was held at each temperature with a precision of 1mK using a temperature controller before measuring the voltage across the resistor with a digital oscilloscope. The input resistance (50W) of the oscilloscope was the resistance in the RC circuit. The recorded data was fitted to an exponential decay. These results give insight into the behavior of the time constant in the different phases and near the phase transitions. This method is used to study the dielectric relaxation of the new liquid crystal C-16 fluorescent dipyrinone, synthesized in the Department of Chemistry, University of West Florida.

93. Optical Investigation of Novel Liquid Crystals

Arielle Adams, Joseph Virgilio, Aaron Wade
Department of Physics - OUR Funded

We present our research on the optical investigation of the phase transitions of novel, optically active liquid crystals (LC's) fabricated at the UWF Chemistry Department. As liquid crystals transition from the isotropic to the nematic to the smectic phases, they have different levels of alignment. This results in a change in the fluorescence spectra and transmitted optical properties as a function of temperature. Sample preparation consists of spin coating the LC, forming an optical cell. The sample is then placed in a temperature-controlled environment. Fluorescence is induced by pumping the sample at 355 nm from a frequency-tripled, pulsed Nd:YAG laser. The fluorescence is measured with a spectrograph. Simultaneously, the transmission is measured with a photodiode. The results show significant changes in spectra and transmitted light near the phase transitions, allowing for precise measurements of the phase transitions.

94. Parallel Performance Analysis between Free Response Environments and the Force Concept Inventory in Introductory Mechanics Courses

Nicole Bobbitt, Aaron Wade

Department of Physics - OUR Funded

This paper reports our attempts to: 1) create a problem solving situation that folds in both kinematics and force discussions 2) find a way to model and predict common thought processes that cause typical misconceptions identified by the Force Concept Inventory (FCI). Two pen and paper test questions were designed with these goals in mind, both broken into specific elements to arrive at a quantifiable fragmentation of the necessary thought processes required to solve the problem. These results were compared to pre- and post-FCI data to analyze the common misconceptions as defined by FCI. The data was analysed using factor analysis to group performance across the two environments. Two styles of grading were used to highlight the effectiveness of this method. Ultimately this, and any future questions, would become a tool in the classroom to pinpoint the critical ideas with which a typical student struggles during an introductory mechanics course.

95. Nonlinear Spectroscopy Investigations of Molecular Reorientation Under the Influence of an External Electric Field

Josiah Anderson, Nathan Cooper, Laszlo Ujj

Department of Physics - OUR Funded

It is well known that molecules having a permanent dipole moment tend to orient in the direction of the electric field at room temperature. The reorientation can be probed with the help of linear spectroscopy methods such as fluorescence spectroscopy. We have used nonlinear Raman scattering spectroscopy to quantify the orientation effect of the dipoles. The vibrational spectra of the molecules has been recorded as a function of the external electric field. The spectral signature changes observed during the measurement are directly linked to the molecular reorientation. The measurement has been recorded with a laser spectrometer comprised of a Nd:YAG laser and an optical parametric oscillator. The spectra has been recorded using a monochromator with a CCD detector. The newly developed method can be used to probe the orientation effect of any molecules having permanent dipole moment.

96. The Death of the Death of Philosophy: Dogmatic Science and Spectral Philosophy in Philosophic Naturalism

Jordan Stanton, Sally Ferguson

Department of Philosophy - Honors Thesis

Naturalism is a school of thought in the philosophy of science that believes all non-trivial philosophic ques-

tions are in fact scientific questions or otherwise can be significantly aided by scientific thought. Naturalism is a very admirable school of thought. It does not attempt to find a first philosophy that is the foundation of science nor is it relativistic. Yet still there is a certain element of dogmatism in regards to science that exists in naturalistic thought. Also its regard for philosophy can be as that of a specter, a ghost of a school of thought that no longer exists. In general, though, naturalism's treatment of science is similar to many other schools of thought in the philosophy of science, it dogmatizes it and considers it a natural part of the world when in fact it is just as artificial of a construction as philosophy. This is not to discount science as a commendable force for obtaining knowledge of the universe, but many naturalists believe that science may bring about the death of philosophy. I am observing, in this thesis, that naturalist may view science as more dogmatic and philosophy as more spectral than those respective fields actually are. Science and philosophy are not as different and separate as one might think. They are both interconnected webs of linguistic content that give us a variety of ways to map reality. In the end, though, we can be scientific realists, while still not bringing about the death of philosophy.

97. A Review of Preconception Peer Education Programs at Colleges and Universities.

K'yone Zenobia Johnson, Sarah Rupnaraine,
Erica Jordan

Department of Psychology

Preconception care aims to promote the health and wellness of women at reproductive ages before conception by way of improving pregnancy-related outcomes and preventing infant mortality. In America, women who attend colleges and universities can gain benefits from preconception programs and benefit the people in their communities by being a source of knowledge about preconception health issues. Having preconception programs at colleges and universities offers interventions for women to raise awareness, change behaviors, and gain knowledge about proven factors that can affect the health of them and their baby once they are pregnant. This study will review several preconception peer education programs at colleges and universities in America to demonstrate the need for such programs at all colleges and universities. The study will review the aspects of the programs, the programs' effectiveness at raising awareness, and ways in which the programs' participants gained knowledge. A comparison among the programs will be made to show what preconception risks factors for adverse pregnancy outcomes were used. Implications for practitioners who work with young women and directions for future research studies will be discussed.

98. An Exploration into Racial Differences in Social Anxiety and Trauma Symptomatology

Jessica Thurmond, Elliott McCully, Erica Jordan
Department of Psychology

Research suggests that people from different races may carry slightly different attitudes or reactions to stressful or traumatic experiences (Lee, Okazaki, Yoo, 2006), but on a significant level, experiences across races and cultures are generally the same. The exception to these findings is people who classify themselves as multiracial. The present study set out to assess trauma symptomatology and social anxiety among different racial groups (Caucasian, African-American, Hispanic, Asian and multi-racial). Self-report questionnaires were administered to 440 undergraduate students (87 men, 353 women, $M=21.96$ years, $SD=6.56$) through voluntary, anonymous online surveys. From this set a random sample was taken of 35 participants from each ethnic category ($N=175$). This investigation employed two, one-way, between-subjects analysis of variance (ANOVA). Results indicated a significant difference at the $p < .05$ level between the Caucasian sample and the multiracial sample [$F(4, 170) = 2.63, p = .04$] with regards to trauma symptomatology but no significant difference in social anxiety [$F(4, 170) = 1.29, p = .28$] or between any other racial samples. Though the results for social anxiety were not significant it is worth mentioning that the mean score of the multiracial sample was ten points higher than the Caucasian mean and indicated clinical levels of social anxiety. The findings suggest the need for further exploration into self-perceptual differences between racial groups and the ways in which different cultures internalize experiences.

99. Character Strengths and Academic Achievement

Jaclynn Lawhon, Erica Jordan
Department of Psychology - Honors Thesis

Previous research has shown that certain personality or character strengths can correlate to stronger academic achievement. Therefore, the purpose of this study was to examine the relationship between character strengths and academic achievement (operationally defined as grade point average). It was executed using the Values in Action Inventory of Strengths (VIA-IS) and by gathering self-reported data from the participants regarding their GPA. The VIA-IS is a 240-item questionnaire that was designed by Christopher Peterson and Martin Seligman in 2004. It identifies 6 virtues (wisdom, courage, humanity, justice, temperance, and transcendence) which encompass 24 strengths. Participants were recruited online at the University of West Florida (UWF) School of Psychological and Behavioral Sciences (SPBS) Psychology Research Pool (PRP). All participants were UWF Undergraduate students. Results and implications for educators will be discussed.

100. Comparing Discipline and Mother-Child Attachment in Single-Parent Versus Dual-Parent Families

Elizabeth O'Connor, Paul Eastman,
Rachael Lagozzino, Erica Jordan
Department of Psychology - OUR Funded

Family structure may be an important factor that influences interactions among family members. Previous studies have found that the nature of the parent-child relationship in single-parent families may be different than the nature of the parent-child relationship in dual-parent families (e.g. Nobes and Smith, 2002; Aronson and Hutson, 2004). The primary objective of the present study is to determine if differences exist in mother-child attachment quality in families headed by single-mothers (without a co-parent) versus mother-child attachment quality in dual-parent families. Previous studies have also shown that the parent-child relationship can be affected by the type of discipline relied upon by parents to guide their children's behavior (Gershoff, 2002). The secondary objective of the present study is to determine if single mothers rely on different disciplinary strategies than parents in dual-parent families. Undergraduate students attending a large, Southeastern university were recruited to voluntarily participate in the study and reported on the types of discipline that they received during childhood and their current attachment quality to their mother.

101. Content analysis of helpline calls: A retrospective study

Anna Hinesley, Margeaux Donovan, Ronald Belter
Department of Psychology - OUR Funded

The current study is a content analysis of crisis line calls from the years 2009 to 2012. One key factor in this particular study is that the crisis helpline from which the data were derived is located along the northern coast of Florida, which was affected by the Deepwater Horizon Oil Disaster in 2010. In addition to determining the overall content categories of crisis line calls, our study provides a retrospective study of changes that occurred immediately following and since the oil disaster, which yielded an economic downturn in the year following the disaster. All call sheets will be transcribed into an excel spreadsheet with date, time, length of call, presenting concerns, plan of action, and whether the caller is a repeat caller. The calls will be coded according to Stephanie Ingram's Boys Town Hotline Presenting Problems Codes. Only calls that are determined to be counseling calls will be selected for the coding. This research is currently in progress.

102. Co-Occurring Forms of Child Maltreatment as it Relates to Adult Social Anxiety and Trauma Symptoms in University Undergraduates

Jessica Thurmond, Erica Jordan
Department of Psychology - OUR Funded

Previous research suggests that being exposed to multiple abuse forms may lead to lower psychological functioning in adulthood (Clemmons, DeLillo, Martinez, DeGue & Jeffcott, 2003). The primary objective of the present study was to test for group differences in trauma symptoms among adult participants subjected to co-occurring forms of maltreatment (23.6%), one form of maltreatment (27.9%), and no maltreatment during childhood (48.5%). Another area of interest was the potential influence that co-occurring forms of child maltreatment may have on adult social functioning. Thus in addition, the second objective was to examine the relationship between co-occurring forms of child maltreatment and adult social anxiety. Self-report questionnaires were administered to 165 undergraduate students (22 men, 143 women, $M=22.7$ years, $SD=6.7$) through anonymous online surveys. This investigation employed two, one-way, between-subjects analysis of variance (ANOVA). Results indicated significantly greater trauma symptomatology at the $p < .05$ level in participants who experienced co-occurring child maltreatment (both physical and sexual) in comparison to participants reporting one form or no forms of maltreatment, $F(2,162) = 18.5, p < .01$. Participants who experienced co-occurring maltreatment also reported significantly higher levels of fear-based social anxiety, $F(2,162) = 3.6, p = .03$. No significant differences were found at $p < .05$ between participants who experienced one form of child maltreatment and those who experienced none. The findings suggest that even among individuals who display qualities of resilience, multiple risks may be related to abnormal adult functioning.

103. Co-occurring Childhood Maltreatment: An Exploration of the Predictors of Higher Academic Achievement and Social Efficacy in the Workplace

Jessica Thurmond, Nichole Humphreys,
Erica Jordan

Department of Psychology

The purpose of the current research project is to evaluate the relationship between childhood maltreatment (e.g., neglect, sexual, physical, and/or emotional abuse) and adult academic achievement and professional relationships by looking at the influence of parent and peer attachment. It is also the intention of this project to explore whether transgression forgiveness decreases the level of trauma symptoms during adulthood and increases academic achievement. At least 180 undergraduate and graduate participants will be recruited through the University of West Florida School of Psychological and

Behavioral Sciences Psychology Research Pool (PRP) as well as through the general student body. Participants will be administered an anonymous on-line survey in which they will be given a basic demographic questionnaire including a question about their current academic GPA, the Inventory of Parent and Peer Attachment Revised (IPPAR), the Trauma Symptom Checklist-40 (TSC-40), a modified version of the Life Stressor Checklist Revised (LSC-R), the Transgression-Related Interpersonal Motivations Scale, and the Workplace Social Self-Efficacy Inventory. Based on the findings of Prigoff (1999) we predict that (H1/H2) strong familial attachments will be a greater predictor of both academic achievement and social efficacy in the workplace over one's ability to forgive past transgressions. We also predict that (H3) a higher propensity for transgression forgiveness will predict lower adult trauma symptomatology.

104. Cross-cultural comparison of resilience of parents of sick children in Colombia and the United States

Nicolette Ramirez, Sherry K. Schneider
Department of Psychology - OUR Funded

The purpose of this study is to measure the level of resilience and subjective happiness of 200 parents with sick children in Colombia and the United States. Special emphasis will be placed on maternal resilience, but fathers will also be surveyed to discern the variances in maternal and paternal resilience. It has been found that maternal resilience has major implications in the resilience of their offspring (Aronowitz, & Morrison-Beedy, 2004), but to date little research has been done to document the causes of maternal resilience, and how it is connected to subjective happiness. The study will also compare the measure of parental resilience in Colombia, a matriarchal, collectivist society, to the parental resilience in America, a generally masculine, individualistic society. Resilience (Wagnild, 2009) and subjective happiness of mothers is expected to be higher than fathers in Colombia, and higher than mothers in the U.S., based on the prominent role of the matriarch in Colombian society. Demographic data and open-ended question data will be used to describe any differences in resilience and happiness of parents between the two cultures.

105. Differences in How Younger and Older Adults Select Mental Health Treatments

Alaina N. Talbot, Rodney P. Guttmann
Department of Psychology - OUR Funded

Historically, research on health decision making shows how only medical practitioners utilize critical thinking skills to determine which treatments should be presented to patients. There is very little research dedicated to understanding how patients select treatments. To determine if critical thinking skills could influence treatment selection, the current study evaluated how participants

with differing levels of critical thinking skills selected among three pharmaceutical treatment options: SSRIs, St. Johns wort, and acai berries. Researchers randomly selected participants from two samples previously collected and assigned them to a younger adult or older adult category based on their age. Researchers matched the two samples as closely as possible based on ethnicity and sex. Participants were presented with three pharmaceutical treatment options, and then completed the Critical Thinking Questionnaire (Sharp & Herbert, 2003) all through SurveyMonkey. Results indicate that older adults have significantly higher overall critical thinking scores than younger adults, as well as a significantly higher Inference score. While critical thinking scores were related to treatment selection among younger adults, the older adults' treatment selection was not. Qualitative data suggests that the older adults relied on statements within the treatment description indicating whether the drug was recommended by a medical professional or not. Results also indicate that older adults have a significantly higher overall critical thinking score, and a significantly higher Inference score. Future research should address how this information is perceived if it is delivered in a commercial format instead of being presented as text on a computer screen.

106. Differences in Virtual Team Interpersonal Behaviors and Performance Across Technologies

Kelly J. Manning, Laura White, Sherry Schneider, Steve Kass, Steven Case
Department of Psychology

Due to rising travel costs and facilitated by advances in multi-user communication technologies, organizations are increasingly using virtual technology to allow individuals in different locations to work together on team projects. There has been some debate over the type of virtual technology that will maximize team efficacy and social development. Media richness theory suggests that the more feedback or cues that are provided by the technology used in terms of information content as well as social cues, the higher team performance and social development will be (Daft & Lengel, 1986; Andres, 2002; Fiol & O'Connor, 2005). A study was conducted to assess the effects of two different virtual technologies on the effectiveness and social interactions of 15 3-person teams completing a software engineering project in an undergraduate computer course. Teams were randomly assigned to communicate via one of two technologies-- the web conferencing program Elluminate Live!™ or the virtual world program Second Life. Over five weeks teams submitted several products to be graded, and at the end of the project participants completed surveys about their experiences with their teammates. Results suggest teams in Second Life were more likely to report negative team experiences such as task or emotional conflict, and less likely to report positive experiences such as cohesion and coordination. Second Life teams were also more likely to report cheating by using technologies other

than those assigned to them.

107. Effectiveness of Training Visual Working Memory in Older versus Younger Adults

Angelica Sullivan, Lisa Blalock, Rodney Guttman
Department of Psychology

Our ability to encode, retain, manipulate, and retrieve visual and spatial information is called Visual Working Memory (VWM). VWM is typically measured using a change detection task in which participants have to detect changes between two sequentially presented visual arrays (e.g., were any of the shapes replaced with a new shape?). The current experiment examined if training can improve VWM performance in both older and younger adults. All participants completed 4 tasks: a training task, a recognition test, a VWM task, and a final recognition test. The results demonstrated a significant decline in performance with age but showed no benefits of training for either age group.

108. Parental Characteristics and Academic Success of Undergraduate Students.

Katelyn Cleary, Erica Jordan
Department of Psychology

Relations between parenting characteristics (such as parental warmth, involvement, and autonomy support) and children's academic achievement have been examined extensively by researchers (Silva, Dorso, Azhar & Renk, 2007, as cited in Starr, 2011; Joussemet, Landry & Koestner, 2008; Grolnick, Ryan & Deci, 1991; Wang, Willett, Dishion, & Stormshak, 2011; Magill-Evans & Harris, 2001). However, these same parenting characteristics have received little attention in research studies aimed at examining academic achievement in young adults attending universities. Similarly, relations between instructor autonomy support and young adults' academic achievement have also received little attention by researchers. Studies of children have found a positive relationship between parents' and teachers' autonomy-support and students self-motivation and success in school (Ryan & Deci, 1997). The primary goal of this study is to determine if a positive relation between parental autonomy granting and academic achievement is moderated by instructor's level of autonomy granting in a sample of undergraduate students. A secondary goal is to determine if young adults' perceptions of parents' warmth, involvement, and autonomy support predict greater academic success both singularly and in conjunction. The hypotheses and relevant literature will be discussed in depth during this research proposal presentation.

109. Predictors of Burnout in University Students

Jessica Gladstone, Erica Jordan
Department of Psychology

Although burnout is typically measured in a work setting, student activities can be considered a job for many students. For those students experiencing burnout, they also experience a decrease in motivation (Jacobs & Dodd,

2003; Law, 2007). Previous studies have looked individually at factors such as personality factors (Morgan & Bruin, 2010), perfectionism (Gould, Udry, Tuffey, & Loehr, 1996; Mitchelson & Burns, 1998), stress appraisals (Meijer, 2007), and coping strategies (Whitman, Spendlove, & Clark, 1984) to determine the association with burnout and motivation on students. The purpose of the present study is to examine the interrelationship between these factors and how they influence whether a student experiences burnout or not. Specifically, one relationship that we are interested in is whether certain personality types in students will lead to a more socially prescribed perfectionism and a heightened level of stress causing a decrease in attachment to teachers and other students, with the result leading to burnout in the student.

110. Psychological Capital, Procrastination, and Persistence within the Academic Domain

John D. Hale, Sherry Schneider, Steve Vodanovich,
Department of Psychology

Positive Psychological Capital (PsyCap), a higher-order construct composed of self-efficacy, optimism, hope, and resilience, has been significantly and positively related to desirable employee attitudes, desirable employee behaviors, and multiple measures of job performance (Avey, Reichard, Luthans, & Mhatre, 2011). Although self-efficacy (Bandura, 1997), hope (Chang, 1998), optimism (Ruthig, Haynes, Perry, & Chipperfield, 2007), and resilience (Martin & Marsh, 2006) have all independently been found to be related to the persistence of goal-directed behavior and positive performance outcomes in academia, little research attention has been given to PsyCap, as a higher order construct, in the academic domain. Moreover, no research to date has been undertaken to examine potential relationships between PsyCap, persistence, and procrastination. The first objective of the current research investigation was to examine academic PsyCap (adapted from PCQ-24; Luthans, Avolio, Norman, & Combs, 2006) and its academic correlates in an undergraduate student sample. The second objective was to compare the performance and persistence of those high and low in PsyCap across three experimental task conditions (i.e., initial success, initial failure, control) that involved solving anagram puzzles.

111. Semantic knowledge eliminates age-related differences in Working Memory Capacity.

Caitlan Webster, Jessica Thurmond, Lisa Van Wormer
Department of Psychology

The majority of previous research has shown clear age-related differences in working memory capacity (WMC), with younger adults outperforming older adults. The Operation Span tasks typically measures WMC by asking participants to memorize a list of words while simultaneously solving mathematical equations. In this study, the list of words were either categorically related (e.g., hammer, wrench, screwdriver) or were categorically unrelated (hammer, jackal, educate). When the to-be-remembered words were not related, younger adults

performed better than older adults; however, when the to-be-remembered words were related, younger adults performed similarly to older adults. These results suggest that older adults can use semantic knowledge to eliminate age-related differences in working memory tasks.

112. Source Monitoring in a Multimedia Learning Task

Cynthia Wallace, Lisa Blalock
Department of Psychology - OUR Funded

Mayer's Multimedia Learning Theory argues that information in multimedia presentations will be best remembered when it is presented in multiple modalities (i.e., visual and auditory) at the same time versus sequentially (Mayer & Gallini, 1990; Mayer & Moreno, 2003). In the current experiment, we examined this contiguity effect by assessing which modality participants most often remembered as being the source of the recalled information. To test this we showed participants a short PowerPoint presentation on lightning formation that contained both a visual component and an audio component. We compared four presentation conditions: (1) both components presented together simultaneously; (2) visual aid presented first followed by an audio description; (3) the audio description presented first followed by the visual aid; and (4) a control condition that did not see or hear anything. When the PowerPoint presentation was completed participants were given a test that assessed how well they retained the information and how well they could transfer that information to new problems. For each question, participants reported what modality they remembered the information from. Those in the simultaneous condition did the best on the retention and transfer questions compared to all other conditions. The control condition had the lowest retention and transfer overall. These results replicate the contiguity effect predicted by the Multimedia Learning Theory. For the source monitoring part of this study, the majority of participants in the audio first condition recalled the information from both the visual and auditory components of the presentation.

113. The Differential Experience of Childhood Maltreatment Between Genders: Is It Really Different?

Jessica Thurmond, Raquita Peasant, Erica Jordan
Department of Psychology - OUR Funded

There is currently a large body of contradicting research on the ways that males and females develop over the lifespan (McLean & Anderson, 2009; Weinstock, 1999). The goal of the current study was to explore the ways that males and females experience childhood maltreatment. In contrast with much of the existing research and based on the findings of Larsen, Sandberg, Harper & Bean (2011) we hypothesized that (H1) there would be no significant difference between the genders in either trauma symptomology or social anxiety in those not subjected to childhood maltreatment; and (H2) these non-significant results between genders would hold constant in those who were subjected to childhood maltreatment. Self-report questionnaires were administered to 440 undergraduate students (87 men, 353 women, M= 21.96 years, SD= 6.56) through voluntary, anonymous online surveys. From this set a random sample was taken of 70 males and 70 females, each com-

prised of 35 participants with and without a history of abuse. This investigation employed two, one-way, between-subjects analysis of variance (ANOVA) to assess trauma symptomatology and social anxiety. Analysis confirmed our hypotheses with no significant differences at the $p < .05$ level between males and females regardless of any or no history of childhood maltreatment. These findings suggest that the emphasis that is often placed on differences between the sexes maybe resulting in a lack of attention to the similarities that exist and indicates the need for further research on the subject.

114. The Role of Semantics During Inhibitory Control in Cognitive Aging

*Katherine Guterman, Nicolette Ramirez,
Elizabeth Oconnor, Lisa Van Wormer,
Rodney Guttmann*

Department of Psychology - SCAC Funded

This study investigated whether or not older adults had more difficulty inhibiting irrelevant information than younger adults because of a decline in cognitive ability due to aging. This idea is known as the inhibitory deficit hypothesis (Hasher & Zacks, 1988). One exception to the inhibitory deficit hypothesis is that if perceptual cues are presented older adults will not show this deficit. This study investigated whether or not the semantics of a word would have an effect on inhibitory control. The extent to which the irrelevant information would have an effect of recall performance depended upon the types of words used (categorical, random, or pseudo). It was hypothesized that when the to-be-remembered words and the to-be-ignored words were the same (categorical/categorical, random/random, or pseudo/pseudo), younger adults would outperform older adults in terms of recall. When the to-be-remembered words and the to-be-ignored words were different types, performance would be the same for older and younger adults. In the categorical condition there was a significant main effect of condition, but no main effect of age. In the random condition, there was no significant main effect of condition, but a significant main effect of age was found. For the pseudo condition, there were no main effects for either condition or age. The results support the idea that the semantics of words may have an effect on inhibitory control in both younger and older adults.

115. The Roles of Stress Perception and Attachment in Resilience of Adult Children of Alcoholics

Kristen Kessler, Erica Jordan
Department of Psychology

Alcoholism has garnered the attention of psychological researchers as they uncover the effects of substance abuse on the family unit. Surprisingly, a positive aspect of this research has been the discovery of heightened levels of resilience and an absence of psychopathology in adult children of alcoholics (ACOA's) despite their challenging home lives (Berkowitz & Perkins, 2012; Carle & Chassin, 2004; Moe, Johnson, & Wade, 2007; Mylant, Ide, Cuevas, & Meehan, 2002; Segrin & Menees, 1996; and Tweed & Ryff, 1991). The next step is to explore which variables moderate this phenomenon with the goal of enhancing treatment

approaches for dealing with the negative effects which have also been documented (e.g. anxiety, alcoholism). The purpose of the proposed study is to examine relations between levels of resilience, perceived stress, and parental attachment in both ACOA's and non-ACOA's. In addition to recruiting college students through the research pool at the University of West Florida, the sample will also include volunteers from a retirement home. Tests will be administered in survey form through the Children of Alcoholics Screening Test (CAST short version), Perceived Stress Scale (PSS), Brief Resilience Scale (BRS), and Inventory of Parent and Peer Attachment (IPPA). Open-ended questions will also obtain participant's views in their own words. The hypothesis that participants' perception of stress and level of attachment to the alcoholic parent/guardian are both related to participants' resilience will be discussed during the presentation of this research proposal.

116. The Successful Spiritual Romantic Relationship: An Overview of Common Themes of Success & Failure Across Psychological Research and Ancient & Contemporary Spiritual Texts

Margeaux Donovan, Michael DeMaria
Department of Psychology - Honors Thesis

Due to high rates of divorce in the U.S. and around the world, the topic of success in the area of romantic relationships is timely and crucial to discuss. Marriage and close romantic relationships are sometimes a place of rest and solace in life, but can also often be a place of turmoil and deep emotional pain. This study attempts to focus on success rather than failure, thus taking a positive approach, in an attempt to find an intersection among different spiritual traditions as well as present-day psychological research. Success takes on an operational definition of inner peace and deep connection felt by both parties. Themes of success in romantic relationships are examined theoretically throughout both psychological research and spiritual texts, both ancient and contemporary. Through the lens of the Buddhist tradition of Tantra, Taoism, Hinduism, and contemporary spirituality as well as controlled psychological research, a common thread of individual inner peace, wholeness, healthy independence, and spiritual connection seem to provide an environment conducive to success and unity as a couple, especially as a relationship matures. As love deepens, it becomes a choice. After the rush of the honeymoon stage, romantic love can be one of the most profound classrooms of life. While the intricacies of human connection and emotion can arguably not be measured empirically, spiritual teachers past and present seem to point to these same themes, which provide implications for future empirical psychological research in the field of marriage and family therapy.

117. Fostering Motivation

Donald D. Cooper, Kelsey Fleming, Giang Ngyugen-Ngyugen
Department of Teacher Education - OUR Funded

Currently, many students are not able to perform tasks in mathematics classroom. Research indicated that these low performing students eventually lose interest in school and

dislike this particular subject due to their past "failures" and grades. In an informal setting, we applied different approaches to teach mathematics and built students' confidence. Student participant in this study gradually improve their performance in mathematics content areas that they previously thought was impossible to master. Through this study, we provided evidence indicating that with a little encouragement to meet their psychological needs were beneficial to the group of lower performing students, those who failed their grades mathematics could improve their proficiency.

118. Visual representation between Basic Trigonometric Functions and the Unit Circle.

Kelsey Fleming, Giang-Nguyen Nguyen
Department of Teacher Education

Many students learned to use the unit circle to determine the values of sine, cosine, and tangent. However, understanding the graphic connection between the unit circle and trigonometric functions can be challenging for students. In this project, I explored these relationships based off of an applet. Furthermore, I used the GeoGebra Dynamic Software to animate the graphs of sine and cosine functions that formed from the unit circle onto a coordinate plane. This approach would help student visualize the direct connection between cosine and sine graphs and the unit circle when solving simple trigonometric problems. Additionally, this allows students to see the connection between the radian and degree measurements on the unit circle.

119. The Benefits of Diversity Training

Tara Jordan, Roz Fisher

Department of Interdisciplinary Studies

Since the 1980s, the idea of diversity training has been important in the corporate and business world. Until recently, there was little research that documented the effectiveness of these training sessions. With adequate research and evaluation, better and more effective training practices can be implemented and met with much better results. My presentation will cover the historical background of diversity training, along with the theory behind it. I will conclude with observations and studies, and which training methods increase the effectiveness of diversity and cultural competence training.

Performances and Presentations

Seeking Redemption: The Clergy Project applied to Kenneth Burke's Terms of Order

David Feliciano, Tressa Kelly
Communication Arts

The Clergy Project is a confidential online community, for active and former clergy who are struggling with doubts of their faith or transitioning to a non-religious life. In an effort to better understand this transition from beginning to end, I have analyzed the Clergy Project through the lens of Kenneth Burke's guilt to redemption cycle, which examines social drama and emphasizes human desire to

restore order once it erodes in an individual's search for restoration.

Robert Schumann's Illness and Its Effect on His Music *Patricia Izbicki, Hedi Salanki-Rubardt* *Music*

One of the most compelling composers of the nineteenth-century, Robert Schumann was known for exhibiting beauty, artistry, and passion in his music. His musical compositions contain great lyricism and virtuosity. Schumann, however, was an extremely complex and troubled human being. As a young man, Schumann suffered from two major physical ailments: a hand injury and syphilis. These afflictions heavily impacted the course of his life. The hand injury ended his dream of becoming a concert pianist when he was in his early twenties. The syphilis caused increasing physical and mental pain throughout Schumann's life. In his later years, Schumann had a complete nervous breakdown likely caused by the late stages of syphilis. He attempted suicide and later admitted himself to the sanatorium in Endenich till his death. My research will examine how Schumann's physical illnesses affected his mental well being, how his medical ailments affected his style of musical composition, and the type of medical care used in the nineteenth century to treat Schumann's mental and physical conditions.

