The University
of West Florida

Student Scholars Symposium

"A Celebration of Ideas"

April 21, 2011

The University of West Florida

Program and Abstracts

Student Scholars Symposium

Programs & Abstracts
April 21, 2011

Editors:

Pamela Pippin Vaughan, Ph.D.
Director, Office of Undergraduate Research

Ashley Roberts
Office of Undergraduate Research

Aaron Smith
Communication Arts Department

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Office of Research and Sponsor Programs

The Univerrsity of West Florida
Graduate School

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We thank the departmental representatives who reviewed abstracts for the Symposium:

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Jun Wei
Xuan Tran
Carol Tanksley

Additionally, we thank our volunteer judges and Dr. Jocelyn Evans for coordinating the symposium awards.

Symposium graphic design and program layout by Aaron Smith, Communication Arts major.

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Welcome

Dear Student Scholars,

I am delighted to welcome you today and I congratulate you on your academic achievement. The University of West Florida has a proud tradition of student involvement in scholarly endeavors. Thus, this symposium is designed so that we can celebrate your accomplishments and you can demonstrate your learning and expertise.

I wish you the very best of luck with your continued academic pursuits. The University of West Florida is proud of your hard work and energy. Enjoy the symposium.

Sincerely,

Judith A. Bense, Ph.D.
President

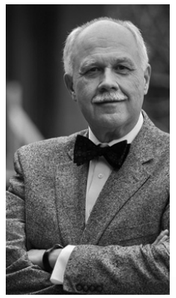
I am so pleased to welcome the many student participants to the first annual Spring Student Scholars Symposium, sponsored by the Office of Undergraduate Research, the Office of Research and Sponsored Programs and the Graduate School. This unique event provides an opportunity for both graduate and undergraduate 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. I wish all of the student participants the best of luck!

Chula King Ph.D.
Provost

Welcome to the 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. Building on the success of SEASTARS, this year we have over 112 presentations across 24 departments from all three colleges.

Last fall, the Office of Undergraduate Research was created to support undergraduate student engagement in research and scholarly activities across all disciplines. The Office facilitates collaboration between students and faculty through funding and administrative support for undergraduate scholarly work. Highlighted in this program are those students whose projects received support from the OUR, including many students 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
Dr. Pam Vaughan
Director, Office of Undergraduate Research

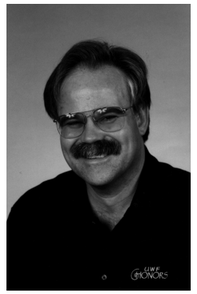


Applied research is integral to UWF's core mission. The Graduate School and the Office of Research and Sponsored Programs are excited to co-sponsor the inaugural Student Scholar Symposium. This is an exciting opportunity to celebrate the accomplishments of our undergraduate and graduate students as they showcase their research.

We owe a special acknowledgement to our faculty who foster a love for research in the classroom and laboratory and mentor students to become researchers themselves. Many of the presentations at today's Symposium are the result of just such faculty-student collaborations. Congratulations to everyone who help to ensure the success of in this wonderful event.

Richard S. Podemski
Dr. Richard Podemski
Associate Vice President for Research
Dean of the Graduate School

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!



Gregory W. Lanier
Dr. Greg Lanier
Director of Honors

I'm delighted to offer my congratulations to all of the faculty and student scholars who have contributed to our very first Student Scholars Symposium. The College of Arts and Sciences has had a very successful spring scholarship tradition in SEASTARS and it is exciting to see the showcase opportunities spread so broadly.

I think occasions like this give us a real opportunity to remind ourselves about what makes UWF such a special place to learn and to work. Congratulations to Pam Vaughan and the hardworking committee that brought this event to its happy conclusion. Well done!

Jane S Holonen
Dr. Jane Holonen
Dean of the College of Arts and Sciences

To all faculty and students participating in the University of West Florida's first Student Scholars Symposium, 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 symposium showcases the exceptional educational experience offered at UWF.

Sincerely,

Dr. Ed Ranelli,
Dean of the College of Business

On behalf of the College of Professional Studies, it is my pleasure to recognize and honor the outstanding work of our students at the first Student Scholars Symposium. For those of you who will present your work at this symposium, I congratulate you on a job well-done. We encourage you to continue striving for the best in your studies and your careers. This symposium demonstrates the rewards of scholarship and intellectual endeavors, and shows how the dedication of our faculty can lead to wonderful opportunities for our students. We wish you all continued success.

Pam Northrup
Dr. Pamela Northrup
Dean of the College of Professional Studies

Schedule of Events

10:00 am - 2:30 pm: Open to public viewing

10:30 am - Field House Stage
Visual and Performing Arts
A Lesson in Love
Brandy Hooper *Jessica Benitez*

11:00 am - Field House Stage
Visual and Performing Arts
Selected scene(s) from Moliere's comedy Tartuffe.
Nicole Dickson *Keegan Stull*

11:30 am - Field House Stage
Visual and Performing Arts
Louder Than Words
James Mitchell *Leah Arington*
Kate Bollone *Toni Bonaccorso*
Ruben Diaz *Erin Finnegan*
Rashawnda Foster *Chris Frazier*
Lauren Johns *Savannah Simerly*

11:45 am - 12:35 pm: Oral presentations in the HLS facility classrooms

11:45 am - 12:05 pm - Room 209
Camp Fire USA Public Relations Plan
Tiffany Elise McWilliams

11:45 am - 12:05 pm - Room 210
Gubernatorial Power in the Face of War
Rebekah Johansen

12:15 pm - 12:35 pm - Room 209
Rhetorical Criticism of the Exclusion of a Lane Bryant Commercial Ad
Kristen Rowland

12:15 pm - 12:35 pm - Room 210
Maternal Attachment Style and Family Interactions
Stacey Bass

12:00 pm - 1:00 pm: President's Reception for Sponsors, Judges, and Volunteers

12:00 pm - 2:00 pm: BBQ club cookout for Participants and Students

12:30 pm: Phi Kappa Phi Induction Ceremony

1:30 pm: Phi Kappa Phi Reception for Members and their guests

2:00 pm: Awards Announcement

Poster Map and Listings

Department Abbreviation Listings

ACC	Department of Accounting
ANT	Department of Anthropology
ART	Department of Art
BY	Department of Biology
CHM	Department of Chemistry
COM	Department of Communication Arts
CRJ	Department of Criminal Justice
ECO	Department of Economics
EH	Department of English
ELE	Department of Electrical Engineering
EVR	Department of Environmental Science
GOV	Department of Government
HIS	Department of History
HLP	Department of Health Leisure & Excercise Science
MAT	Department of Mathematics
MM	Department of Management MIS
MRB	Department of Marine Biology
PHI	Department of Philosophy
PHY	Department of Physics
PLA	Department of Justice Studies
POS	Department of Political Science
PSY	Department of Psychology
SS	Department of Computer Science
TA	Department of Theatre

1 ACC
The Fight for Equal Footing in Tax Court: Attorney's vs. CPA's
Hillary Ryan
Honors Thesis

2 ANT
Cross Cultural Communications in a Clinical Environment: A common ground between anthropology and biological health sciences
Charity Vander Wall
Honors Thesis

3 ANT
Seafaring in the Ancient Mediterranean
Breanna Ifland
OUR Funded

4 ANT
Archaeology of Roatan
Capri Jazz Harvey
SCAC Funded

5 ANT
An examination of potential mass burials within St. Michael's Cemetery, Pensacola, FL
Nicole Rosenberg Marshall; Dr. A. Joanne Curtin

6 ANT
Excavation of coffins from an underwater environment and embedded in a root mass
Stephanie Ward; Dr. A. Joanne Curtin
SCAC Funded

7 ANT
Raw Milk: For Pet Consumption Only?
Leigh Phillips; Natalie Tredway

8 ART
Manipulating Microsoft's Xbox Kinect
Daniel McSwain; Faculty Mentor: Joseph Herring
OUR Funded

9 BY
Analysis of Reef Fish Diet and Trophic Position at Natural and Artificial Reefs in the Northeastern Gulf of Mexico
Joseph H. Tarnecki; William F. Patterson III; Dustin Addis

10 BY
Comparing and Evaluating Thermal Ecology in Dusky Pipefish and Gulf Pipefish
Lois A. O'Boyle; Wayne A. Bennett Jr.
SCAC Funded

11 BY
Diversity of microbial communities in Pensacola Beach due to Deepwater Horizon Oil Spill
Yen Chau
OUR Funded; Honors Thesis

12 BY
Estimation of Thalassemia versus Iron Deficiency in the United States
Nemat Ashraf; Michael Johnston; Kristina Behan, PhD; Justice Mbizo, DrPH
Honors Thesis

13 BY
Screening for Bioactive Compounds Produced by Plants on the UWF Campus
Steven Perz
OUR Funded; SCAC Funded

14 BY
Construction of an aph-1 Transgene
Joanna Lamb; Dr. Hui-Min Chung
OUR Funded

15 BY
Preliminary Age Estimates of the Smalltooth Sawfish
Rachel M. Scharer; William F. Patterson III; John K. Carlson; Gregg Poulakis
SCAC Funded

16 BY
The response of phytoplankton communities to nutrient enrichment experiments in three northern Gulf of Mexico estuaries
Kendra Straub

17 BY Comparison of Age and Growth Rates of Red Snapper, Lutjanus campechanus, in the North-central Gulf of Mexico
Joshua T. Neese; William F. Patterson III; Joseph H. Tarnecki

18 BY Efficiency of light sources for PMA activation to distinguish live vs. dead cells using qPCR
Elizabeth Kennedy; Karen Cravero; Kristen Hellein; Joe Eugene Lepo
OUR Funded

19 BY Hunting for a Tubby Homolog in Tribolim casteneum
Thomas Stephenson; Rainey Booth; Nicholas Spencer

20 BY Regional differences in age growth, and mortality of Gulf of Mexico gray triggerfish, Balistes capriscus
Carrie Fioramonti; Robert Allman; William Patterson

21 BY Coquina clams (Donax variabilis) as indicators of coastal hydrocarbon contamination
Christina Welch; Gracie Exline; Richard Snyder
OUR Funded

22 BY Detection of phosphoinositide-binding proteins in Tetrahymena vorax using liposomes as an affinity matrix
Thomas M. Yarbrough; Phillip E. Ryals
SCAC Funded

23 BY Effects of Lithium Chloride and Valproic Acid on Phospholipid Composition of Tetrahymena patula
An L. Lawrence; Phillip E. Ryals
SCAC Funded

24 BY The effects of lithium and valproic acid on protein phosphorylation in Tetrahymena patula
Katie C. Sprinkel; Phillip E. Ryals
SCAC Funded

25 CHM Designing, Assembling and Integrating a High Vacuum System on a MALDI Reflectron-TOF MS
Georgia Boles; Jonathan Buttrick; Jessica Carter; Nickolas Zingaretti; Karen S. Molek
OUR Funded

26 CHM Using ICP/MS to Determine the Efficiency of Metal Remediation Materials
Chelsie Beck; Maureen Bruns; Pamela Vaughan
OUR Funded, Honors Thesis

27 CHM Polymerization of 3-Oxetanol
Cholena Russo; Mitra Vashi; Tim Royappa
SCAC Funded

28 CHM Development of a method for the detectin of Polynuclear Aromatic Hydrocarbons in Coquina
Alexandra Vestal; Robert Pelot

29 CHM Seasonal Patterns of Ultraviolet Photo-protective Pigments in Phytoplankton
Holly Prochazka; Kyrsten Mckeand; Sharon Blackwell; Jennifer Glancy; Victoria Singletary; Wade Jeffrey; Pamela Vaughan

30 CHM Synthesis and Hydrogen Bonding Studies of New 9-Dipyrrinone Carboxylic Acid Derivatives
Dolan Dean; Stephani Spiegel; Luis Flores; Korry Barnes; Michael T Huggins
OUR Funded

31 CHM Fluorescent detection of organophospate chemical warfare agents
Deborah Barkley; Ian Walton; Michael T. Huggins
OUR Funded

32 CHM Examination of Triclosan Photo-degradation with Varied Salinity and Organic Matter Content
Janae Baptiste; Paulie Bruns; Amber McCarver; Pamela Vaughan

33 CRJ Florida's Juvenile Justice System: Why are Children in Adult Prisons?
Mary K. Jones
OUR Funded; Honors Thesis

34 CRJ A Preliminary Analysis of Employment Opportunities for Offenders in Northwest Florida
Danielle Butler; Justin Flynn; Laura Groat; Brittany Hoyt; David Morrell; Amanda Tryling; Robert Zuchowski; Dr. Cheryl Swanson

35 ECO Prevalence of Corn in Today's Economy Ruth Ashley;
Tabatha Ducharme

36 ECP Hardware/Software Interfacing of an Indoor Navigation System: Auto-pilot Reconnaissance Quad-Copter
Brandon Walker; Michel Starr
OUR Funded

37 ECP ATLAS: All-Terrain Land Autonomous Scout
Kevin Denney; Joshua Mathis; Philip Nadenbousch; Daniel Skrabacz; Roman Tillman
OUR Funded

38 ELE iRobot Create: Traffic Simulations
Joshua Davis; Michel Starr; Brandon Walker; Anton Yaresko

39 ELE Autonomous Research Sufrace Vessel
Anton Yaresko; Alexander Keyhani

40 ELE High-Speed Video Camera Frame-Rate Validation
Jarrod D Palmer; Ezzat Bakhoum
OUR Funded

41 EVR Alternative Energy: Coast to Coast
Jessica Engel

42 EVR Initial Changes in Soil Quality Characteristics due to the Adoption of Mob Grazing
Maureen Harrington
OUR Funded

43 EVR Effect of Mob Grazing on Soil Quality
Hallie Johnson; Johan Liebens
OUR Funded

44 EVR Multidecadal predictability in summer drought variability in the Southeastern United States
Ashley Weatherall; Dr. Jason Ortegren
Honors Thesis

45 EVR The Effects of Fire on Groundwater Chemistry
Stephen Schoen; Dr. Matthew Schwartz
OUR Funded

46 EVR Groundwater Nutrient Variability and the Implications of its Discharge
Mike Koban
SCAC Funded

47 EVR Seasonal Variation of Groundwater Discharge and Groundwater Nutrient Inputs of Western Escambia Bay
Dawn Prince
SCAC Funded

48 EVR Examination of Longleaf Pine Savannah Restoration on the University of West Florida and Suggestions
David Lee; Jason Ortegren

OUR Funded

49 GOV "Devolution in the United Kingdom: Enhancing or Undermining the State?
Jennifer Reid
Honors Thesis

50 GOV Civics Education: Comparing Public, Private and Home Settings
Mary Ann Johansen
Honors Thesis

51 GOV The Federalist Debate within the European Union
Jennie Linder Cunningham

52 GOV China's Naval Security Strategy: Peaceful Rise or Looming Threat
Michael Trevathan

53 GOV The Politics of Defense Contracting: Assessing the changes from the 1990s to 2000s
William Nugent

54 GOV Picking Your Battles: How Rational Litigants Shape the Political Landscape by Venue Shopping at the Federal District Court Level
Jessica Hayden

55 GOV The Deinstitutionalization of Congress
Jennifer Hobbs Fulmer

56 GOV Presidential Approval Rating in Response to Significant Events
David Hunter

57 GOV Preceding Judicial Decision-Making
Kyrsten B. York

58 GOV US House of Representatives' District Size:Inverse Relationship
Matthew J. Schwalb

59 HIS Preserving Historic Foley: the Foley, Alabama, Historic District
Jonathan O'Neil; Adrea Watford; Allison Wolford
OUR Funded

60 HLP Examining a Treatment for Survivors of Sexual Violence with PTSD Utilizing CBT and Aerobic Exercise
Erika Smith;Petra Schuler; Ludmila Cosio Lima; Robert Rotunda
SCAC Funded

61 HLP The Influence of Unconscious Needs on Hotel Brands
Jennifer Kelly; Xuan Tran
OUR Funded; SCAC Funded

62 HLP Impact of Conscientiousness and Extroversion on Hotel Preferences
Jackie Lee; Xuan Tran
OUR Funded; SCAC Funded

63 MAT Avoiding Partial Latin Square Simultaneously
Hannah Berry; Dr. Jaromy Kuhl

64 MAT Using MATLAB to Solve Real Symmetric Eigenvalue Problems
Tatum Tirado

65 MAT The Finite Difference Methods for the Partial Differential Equations
Travis Dimming

66 MAT Representation of a flow: The Navier-Stokes equations
Megann Kirk

67 MRB Differences in Northern Gulf of Mexico Reef Fish Size and Community Structure Before and After the Deepwater Horizon Oil Spill
Kaityln Toebe; Joseph Tarnecki

68 MRB Trophic Ecology and Population Dynamics of Tomate, Haemulon aurolineatum, on the Northern Gulf of Mexico
Micahel J. Norberg; Joseph H. Tarnecki; Joshua T. Neese; William F. Patterson, III
OUR Funded

69 MRB Analysis of the Donax (Mollusca: Bivalvia) populations post Deep-Horizon oil spill from Pensacola Beach and Perdido Key Beach, FL
Stephanie Witherspoon; Renee Davis; Rebecca Drake; Travis Theriault; Christopher Pomory; Richard Snyder

70 PHI "The Doctrine of Chance:" Why Pascal Made the Wager
Carter Johnson

71 PHY Fluorescence of CdSe nanoparticles in the liquid crystal 8CB near the phase transitions
Jodie Gray; Shane Drye; Samuel Beck; Darren North; Tim Royappa; Laszlo Ujj; Chandra Prayaga
OUR Funded; Honors Thesis

72 PHY Nonlinear Dielectric Response of the Liquid Crystal 8CB Near Phase Transition
Hannah Buchanan; Dr. Chandra Prayaga; Dr. Laszlo Ujj; Lance Daley; Shane Drye; Tracy Lawson; Michael Kordell
OUR Funded

73 PHY Spectral Measurements of Fluorescence of CdSe nanoparticles in Liquid Crystals near Phase Transition
Samuel Beck; Jodie Gray; Darren North; Shane Drye; Dr. Chandra Prayaga; Dr. Timoti Royappa; Dr. Laszlo Ujj
OUR Funded

74 PHY Fluorescence decay of CdSe nanoparticles in Liquid Crystals near Phase Transitions
Darren North; Samuel Beck; Jodie Gray; Shane Drye; Dr. Chandra Prayaga; Dr. Laszlo Ujj; Dr. im Royappa
OUR Funded

75 PHY Automation of the Dielectric Characterization of Liquid Crystals
Shane Drye; Lance Daley; Hannah Buchanan; Dr. Chandra Prayaga; Dr. Josaphat Uvah
OUR Funded

76 PHY Development of a high-resolution quartz AC susceptometer for materials property investigation, research training and science education
Sean Heffernan; Neil Baumann; Branwyn Holmes; William Nelson; Christopher Weckerly; Guoqing Wu
OUR Funded

77 PHY Design of a Labview controlled automatic electrical resistivity measurement and data taken system for science research and education
Branwyn Holmes; Lena Ibrahim; William Nelson; Sean Heffernan; Neil Baumann; Christopher Weckerly; Guoqing Wu
OUR Funded; SCAC Funded

78 PHY The calculation of demagnetization field distribution in paramagnetic materials with spherical sample geometries
Christopher Weckerly; Sean Heffernan; William Nelson;

Branwyn Holmes; Neil Baumann; Guoqing Wu
OUR Funded; SCAC Funded

79 PHY Mathematical Model for Investing the Performance Characteristic of Tunable Distributed Feed back Dye Lasers
Matthew Vaughn, Ross Dickinson, Laszlo Ujj

80 MM Development of a Users' Trust Model in Ubiquitous Commerce
Hi Tran; June Wei

81 MM Development of a Mobile Pills Framework
Nien-Chieh Lee; Hi Tran; Albert Yin; June Wei

82 MM Practicing What We Preach: How Leadership Skills Can Change Quality of a College Education
Anna Covington; Wynn Teasley
OUR Funded

83 PLA The Winning Edge
Nathania Louis-Pierre
Honors Thesis

84 POS Gender Stereotyping by the Media in the 2008 Election
Samantha Adams
Honors Thesis

85 POS The Effect of Partisanship on Women's Electoral Fortune in U.S. House Races
Stephanie Jarrait; Jocelyn Evans

86 PSY How to Design, Promote, and Produce a Student-Run Applied Sport Psychology Conference
Tonya Nascimento, MA; Robert Rotunda, PhD; Katy Tran, MA

87 PSY Self-Efficacy and Anxiety in Relation to Students' Future Plans
Angelica Sullivan; Dr. Joan Duer
Honors Thesis

88 PSY Change Blindness: Can We Determine Its Predictors?
Jamie Partyka; Leslie Snedeker; Jenny Hasseltine; Carly Robbins
SCAC Funded

89 PSY Implicit Sequence Learning Within a Unidimensional Framework
Summer Hargraves; Mallory Wells; Carline Radius

90 PSY The Effects of Perceptual Cues on Inhibitory Ability in Older Adults
Amy L. Underwood; Lisa A. VanWormer
Honors Thesis

91 PSY The Roles of Visual Short-Term Memory and Working Memory in Change Detection
Sara K. Senkbeil; Amy L. Underwood; Brandon J. Webb;
Jared B. Crittendon; Lisa A. VanWormer

92 PSY Using Motivations as Predictors of Team Sport Participant Positive or Negative Outcomes
David Hill; Daryll McKinley; Cynthia Moreno
OUR Funded

93 PSY Spatial Averaging the FVEP-P2
Mary K. Hennessey; Elise M. Lullo; Jameson D. Beach; James E. Arruda

94 PSY Cyclic Variations in Sustained Human Performance
Elise M. Lullo; Mary K. Hennessey; Jameson D. Beach; James E. Arruda, PhD

95 PSY The Association Between Sex Education, Age, and Contraception Use at First Intercourse
Stacey Bass; Tamara Powell

96 PSY Peer Group Conformity of Academic Achievement in High School Band Programs
Ashley Rotolo
OUR Funded; Honors Thesis

97 PSY Correlation Study of Idiosyncratic Events and Puberty
Kimberly Rivera

98 SS Autonomous Virtual Rover: Using AI to Navigate and Survive in Unknown Terrain
Travis Dimmig; Joel Lorenz; Dr. Eman El-Sheikh

99 SS An AI Framework for Maze Navigation in Robotic Environments
Zachary Ramirez; Dr. Eman El-Sheikh
OUR Funded

100 SS Very Intelligent STock Analyizer (VISTA)
Anthony Ruble; Jack Davis, Dr. Eman El-Sheikh

101 SS Implementing Swarm Intelligence for Solving Complex Problems
Thomas Broxton, Dr. Eman El-Sheikh

102 SS Virtual Orchestra
Cody McDavid

103 SS Traffic Simulation: A training tool for persons with Autism
Billy Abston; Dr. L. Prayaga; Dr. J. Huband

104 SS Argos Glest: Ambitious AI Automating Annihilation (Intelligent Game Play Using AI)
Titus Brewster; Patrick Brown; Jason Graves; Kraig McConaghy; Dr. Eman El-Sheikh
OUR Funded

105 SS Optimizing Best-Case Performance in WoW Using AI
Andre King, Dr. Eman El-Sheikh

106 SS Let's Make Music: Generating Music Using Artificial Intelligence
John Connor; Dr. Eman El-Sheikh

107 TA Much Ado about Dramaturgy
Sheila Mettetal
Honors Thesis

108 EH Double Vision: A Novel Theresa
C. Kemp
Honors Thesis

Abstracts

1. The Fight for Equal Footing in Tax Court: Attorney's vs. CPA's

Hillary Ryan
Department of Accounting

When the IRS finds tax deficiencies, the taxpayer has a right to dispute these deficiencies in the United States Tax Court. During the trial, representation of the taxpayer is limited to two groups: attorneys and non-attorneys. In 1942 admission to practice in front of the court was restricted to attorneys and those who can pass an examination written by the court. Certified Public Accountants (CPA's), although having a sufficient background in tax, are not allowed to practice in front of the court without first passing this examination, a nearly impossible feat. This project defends the position that CPA's should have the same rights to practice in front of the Tax Court as that of attorneys. The history of the Tax Court examination, the educational backgrounds of both CPA's and attorneys, and the tax qualifications of each profession are looked at and scrutinized in order to defend this theory.

2. Cross Cultural Communications in a Clinical Environment: A common ground between anthropology and biological health sciences.

Charity Vander Wall
Department of Anthropology

First hand experiences from volunteer work in cross-cultural, satellite clinics in Central America is interpreted in reference to published literature on medical anthropology and common miscommunications that occur in cross-cultural settings. This poster provides a definition of medical anthropology, a description of the organization that runs the said satellite clinics, a summary of the ethnographic and clinical field work, and examples of observed miscommunications due to cultural differences.

3. Seafaring in the Ancient Mediterranean

Breanna Ifland
Department of Anthropology

Seafaring in the Eastern sub basins of the Mediterranean is one of the most understudied things from the dynamics of ancient culture. With the emergence of maritime activity in the Hellenic and the Roman era, a new subclass arose under the elite social class-sea merchants and mercenaries. The extended knowledge of nautical science and ship building introduced new trade routes and a faster means of exchange among countries, making it a promising career for many civilians. Raw materials were introduced to different regions and trading goods were bartered; the Mediterranean became the bridge to different regions - influencing a higher conquest rate, war, and acculturation. The expedited exchange from the sea merchants conducted a clashing of culture, ranging from religion representations, myths, marriage, patronage, and moral behavior. Seafaring became associated with the mystic and the unknown world of the Gods and various evils. Different practices and traditions were enforced to ensure a safe journey for the marines, as well as good fortune to the native country. Since, the career choice did not always guarantee a return, seafaring became held in high respect. Overall, maritime interactions had united the Mediterranean empires and formed one of the earliest modules of international relations.

4. Archaeology of Roatan

Capri Jazz Harvey
Department of Anthropology

Roatan, an island located off the coast of Honduras, has a culturally rich past with many important historical figures and events relating to the colonization of the new world. This includes occupations by Spanish, English, Caribs and pirates. Roatan's large part in the interaction between islands in the Caribbean, leaves Roatan with a wealthy source of information about the beginning of Carribean settlement. Information that will be presented includes: a brief history of Roatan, the application of Geographic Information Systems (GIS) to understand Roatan's history and place within in the Caribbean phere, and the review and analysis of archaeological reports about Roatan. The historical summary of Roatan consists of the geography of the island, economic factors such a food sources, occupational history, and myths and legends. By using GIS, I can spatially and visually show what historical documents reveal, which helps create a clearer picture of the historical development of Roatan and its interactions with other islands. Archaeological reports, as well as information from the Honduran Institute of Anthropology and History, give real archaeological and historical data to provide the best possible view of Roatan archaeologically.

5. An examination of potential mass burials within St. Michael's Cemetery, Pensacola, FL.

Nicole Rosenberg Marshall
A. Joanne Curtin
Department of Anthropology

St. Michael's Cemetery is the oldest extant cemetery in Pensacola Florida. Since 2000, anthropologists from the University of West Florida (UWF) have been engaged in ongoing research at the cemetery aimed at documenting its use history. A total of 3,198 extant grave markers have been recorded, but historical records suggest that unmarked graves may also be present. A GPR survey conducted in 2008 identified 3,915 sub-surface anomalies that may represent unmarked burials. Several of these anomalies are significantly larger than would be expected for single interments, and possibly represent mass burials from colonial epidemic events. To test this hypothesis, the UWF Forensic Anthropology Field School conducted excavations at two of the large anomalies in the summers of 2009 and 2010. The goals of these excavations were: (1) to determine whether the sub-surface anomalies do indeed mark mass graves; and (2) to determine the chronology and ethnicity of any burials encountered using attributes and associated artifacts. While neither of the first two anomalies excavated actually proved to be a mass grave, several individual unmarked burials were exposed and documented. This presentation describes the results of the first two seasons of excavations at St. Michael's and the human remains discovered to date.

6. Excavation of coffins from an underwater environment and embedded in a root mass

Stephanie Ward, A. Joanne Curtin
Department of Anthropology

In 2005, skeletal remains were found on Deadman's Island, Florida. During an official search of the area, a hexagonal shaped root mass was observed floating in the intertidal zone. Nearby, more coffin shaped anomalies were located, which appeared to have been displaced by erosion from recent hurricanes. These anomalies were covered in a thick mass of dark roots and sediment and appeared to be coffin lids or bases. However, hospital radiography confirmed that they were not coffin lids but were collapsed coffins containing skeletal material. Excavations were performed on the coffins to determine how the combination of extreme root activity and water exposure affected the decomposition of human remains. Forensic and terrestrial archaeological field methods were used to expose and document the condition of the decedents. This presentation will document the recovery methods required to remove the skeletal material and artifacts from the root mass. The process revealed that although few bones remained intact, a solid mass of small roots defined their location and position. This unusual case will provide insight into the damage that extended exposure to a water environment and roots can do to human remains.

7. Raw Milk: For Pet Consumption Only?

Leigh Phillips, Natalie Tredway
Department of Anthropology

The USDA and FDA provide a compelling argument that pasteurization and homogenization processes of milk prevent pathogenic bacteria from entering the food supply in order to ensure a healthy consumer product. Proponents of raw milk suggest that the increased enzyme and nutrient density of the product provides greater health benefits than pasteurized milk. There is concern that conditions in CAFOs present a great hazard that causes a toxic food product due to the lack of sanitation and improper diets fed to the cows. This experiment will attempt to determine the potential bactericidal effects of raw milk. The project will begin with a review of the available scholarly literature then a summary of interviews with health providers such as a nutritionist, an internal physician, and a naturopathic physician as well as three producers of raw milk. From the farm interviews we hope to obtain a clearer perspective of the challenges small farmers face when trying to produce and sell raw milk products. Another aspect of the research will include testing the bactericidal effects of raw and pasteurized milk. This would include culturing blood or soy agar plates with commonly found pathogens in the milk supply.

8. Manipulating Microsoft's Xbox Kinect

Daniel McSwain
Department of Art

Microsoft's Xbox Kinect is a motion and depth-sensing device, letting a user substitute his or her own body as a controller for the Xbox 360 video game console. Technically, the Kinect is a complex device combining an RGB video camera, a scanning infrared laser, an infrared camera, a motorized tilt mechanism, and 4 noise canceling microphones. The most interesting aspect of this device is its infrared capabilities and the unique embedded imaging software that uses "depth map" to perceive and identify objects in real time. Because this device uses a common USB port, it is possible to connect the module to a computer and build custom drivers and software that allows a user to use the kinect hardware for their own designs and realities. Prior to the release of this device, a person would have to invest thousands of dollars to accumulate the hardware and software to experiment in this field. Now that there is a single device being mass-produced, the ability to succeed in modifying and rebuilding this technology is tremendous. In my process of researching this subject, I look to develop a new and interesting interactive device that helps bridge a gap between humans and machines.

9. Differences in fish community and trophic structure at northern Gulf of Mexico natural versus artificial reefs

Tarnecki, J.H., W.F. Patterson III, J.T. Neese
Department of Biology

Reef fish communities were sampled at natural (n = 24) and artificial (n = 26) reef sites in the northeastern Gulf of Mexico during 2009-10. Community structure was estimated from video samples collected with point-count or transect sampling conducted with a micro remotely operated vehicle that was equipped with a laser scale. Fish (n = 854) then were captured with hook and line, and otolith, stomach, and muscle tissue samples extracted from each individual. Community structure was significantly different between reef types (ANOSIM, $p < 0.001$), but not among depth strata (ANOSIM, $p = 0.121$). Fish community differences between habitats were driven by larger reef fishes, such as lutjanids, haemulids, and balistids, having higher densities on artificial reefs, while small planktivores and invertivores, such as apogonids, chaetodontids, labrids, priacanthids, pomacanthids, and tetraodontids, had higher densities at natural reefs. Most fishes that co-occurred in natural and artificial habitats had similar size distributions between them, although amberjack were larger at artificial reefs and vermilion snapper and red porgy were larger at natural reefs. Red snapper (n = 468) growth rate was not significantly different between natural and artificial reefs (Likelihood Ratio Test, $p = 0.624$), and other co-occurring fishes also had similar size at age between habitat types. Stomach content analysis revealed few intraspecific differences in diet between habitat types, although stable isotope ($\delta 13C$, $\delta 15N$, $\delta 34S$) analysis of muscle samples indicates that fish fed at slightly higher trophic levels, and that their prey tended to be slightly more pelagic than benthic, on artificial reefs. Overall, results indicate few intraspecific differences in trophic ecology and no real differences in size at age exist between habitat types. However, there are clear differences in community structure and fish density between natural and artificial reefs, which have clear implications for reef fish vulnerability to fishing mortality.

10. Comparing and Evaluating Thermal Ecology in Dusky Pipefish (Syngnathus floridae) and Gulf Pipefish (Syngnathus scovelli)

Lois A. O'Boyle, Wayne A. Bennett Jr.
Department of Biology

Little is known about the thermal tolerance of pipefishes that, across their latitudinal range, regularly experience large seasonal and diel shifts in water temperature. In this study, we used critical thermal methodology (CTM) to estimate upper and lower thermal limits of dusky (Syngnathus floridae) and gulf pipefish (Syngnathus scovelli) inhabiting grass beds in the Gulf of Mexico. Acclimation temperatures ranged 11-33°C for gulf and 12-32°C for dusky pipefish. Critical thermal maxima and minima were significantly correlated with acclimation temperature ($p<0.0001$ in both species) and accounted for 93-98% of the variability in CTM. Gulf pipefish had both the highest CTmaxima, 39.6°C, and the lowest CTminima, 3.2°C. Ecological thermal tolerance polygons calculated for dusky and gulf pipefish had total areas of 617°C² and 736°C², respectively. Gulf pipefish possess a significantly larger intrinsic tolerance compared to dusky pipefish, which may indicate disparate use of seagrass habitats. Both species utilize well developed mechanisms for thermal tolerance as well as behavioral adaptations when temperatures fluctuate. Continued patterns of sea surface warming could impact local pipefish populations and challenge them to seek new habitats.

11. Diversity of microbial communities in the waters of Pensacola Beach before, during and after the Deepwater Horizon Oil Spill

Yen Kim Chau
Department of Biology

Microbial communities are directly impacted from environmental stresses, including pollution events such as the Deep Water Horizon oil spill. To investigate whether the bacterioplankton community changed in response to the oil spill, community structure was compared at two sites along Pensacola Beach between May and August, 2010. Water samples were collected by filtration and DNA extracted. Community structure was determined by Terminal Restriction Fragment Length Polymorphism (TRFLP) of bacterial 16S rRNA genes. Time permitting, a second set of analyses will be completed targeting dioxygenase genes that are involved in the degradation of aromatic hydrocarbons. There is potential for a significant difference in the diversity of communities between the different intervals throughout the event of Deepwater Horizon oil spill. Final results are currently being processed.

12. Estimation of Thalassemia versus Iron Deficiency in the United States

Nemat Ashraf, Michael Johnston, Kristina Behan, PhD, Justice Mbizo, DrPH.
1. Department of Biology,
2. Department of Mathematics and Statistics,
3. Clinical Laboratory Sciences Program,
4. School of Allied Health and Life Sciences

Anemia is a condition that develops when the number of red blood cells (RBC) and/or the amount of hemoglobin found in the RBC drops below normal amount. The low production of globin chains in a RBC makes them microcytic or hypochromic; the RBCs are smaller than normal cells and have less color, respectively. Two major classes of anemia produce microcytes, iron deficiency anemia and Thalassemia. Iron deficiency is related to diet and can be cured by iron treatment. Thalassemia is an inherited condition that may require transfusion; treatment with iron can lead to toxicity for these individuals. The prevalence of Thalassemia in the US is unknown, but it is expected to be linked to ethnicity. To estimate prevalence of Thalassemia in the US, we will analyze composite laboratory data from the NHANES (National Health and Nutrition Examination Survey). NHANES is a program of studies that assess the health and nutritional status of individuals in the US. Using this data, individuals with low MCV will be extracted, and those with Iron deficiency can be separated from Thalassemia by ferritin (iron) level. Gender, age and race will be taken into account to calculate the prevalence of iron-deficiency and Thalassemia in this sample.

13. Screening for Bioactive Compounds Produced by Plants on the UWF Campus

Steven Perz
Department of Biology

Plants are under continuous assault by bacteria, fungi, and other pathogens in their natural environment. Successful infection by these invaders is often deleterious to the plant. In response, plants have evolved sophisticated mechanisms for detecting and counteracting microbial pathogens. One part of the response is to synthesize compounds that are deleterious to the pathogen -- a form of chemical warfare. Some of these compounds have been isolated and effectively used in medicine to treat human infections and diseases. In an effort to identify additional useful plant compounds, flora on the UWF campus were screened for antibacterial and herbicidal activities in bioassays. Of the 21 plant species screened, leaf and stem extracts from Albizia julibrissin exhibited the greatest effect in the assays. A thin-layer chromatography system to begin isolating the bioactive compound(s) in A. julibrissin is currently being developed.

14. Construction of an aph-1 Transgene

Joanna Lamb, Dr. Hui-Min Chung
The Department of Biology

The model organism Drosophila melanogaster is used to study a variety of gene functions that have been evolutionarily conserved among the animal species. Aph-1 is a multipass membrane protein that is a component of the γ-secretase integral membrane protein complex. Studies concerning γ-secretase complex and its components (Aph-1, Presenilin, Nicastrin and Pen-2) aim to understand its mediation of the Notch signaling pathway to manage cell fate and pattern formation during embryonic development. The objective of this research is to construct an aph-1 transgene for Drosophila, allowing researchers to manipulate the expression of the wild type aph-1 gene in an aph-1-/- mutant Drosophila at varying stages of animal development in order to uncover the functions of the Aph-1 protein. The assembly of this transgene involves genetic engineering utilizing DNA sequencing, sequencing analysis, restriction enzyme determination, plasmid isolation, and transformation.

15. Preliminary Age Estimates of the Endangered Smalltooth Sawfish of South Florida

Rachel M. Scharer, William F. Patterson III, John K. Carlson, Gregg Poulakis
1. NOAA, National Marine Fisheries Service, South east Fisheries Science Center, Panama City, FL.
2. Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, Charlotte Harbor Field Laboratory, FL.
3. Biology Department

Smalltooth sawfish, Pristis pectinata, is the first marine fish species listed as endangered under the US Endangered Species Act, yet basic life history data critical for conservation are lacking for this species. To address this, we have begun a project to examine whether sawfish can be aged based on counts of opaque zones in vertebrae and rostral teeth. These structures were collected from naturally deceased fish (n =12) in southern Florida. Transverse sections were made through vertebral centra and were read with transmitted light under a stereo microscope. No staining was required due to opaque and translucent zones being clearly defined in vertebral sections. Each section was read independently by two readers without any prior knowledge of fish size. If counts differed between readers, age was assigned by consensus. Size of aged fish range from 600 mm to 4327 mm total length, and age estimates based on vertebral sections are zero to ten years. Age validation and habitat utilization is currently being explored through examination of calcium and trace metal concentrations across vertebral sections with laser ablation-inductively coupled plasma-mass spectrometry. Lastly, longitudinal sections of rostral teeth are being examined to explore whether analysis of rostral teeth may provide an accurate non-lethal aging method.

16. The response of phytoplankton communities to nutrient enrichment experiments in three northern Gulf of Mexico estuaries

Kendra Straub
Department of Biology

Nutrients, both nitrogen and phosphorus, support algal growth in aquatic ecosystems. Yet, nutrient enrichment causes excessive algal growth leading to eutrophication, which can have negative impacts in coastal waters. In this project, nutrients and phytoplankton growth response to the addition of nutrients will be measured. The ambient nutrient concentrations in the system will also be determined. Estuaries, being the dynamic interface of marine and freshwater, are of interest for nutrient and phytoplankton relationships. Grand Bay, Weeks Bay, and Apalachicola Bay of the northern Gulf of Mexico will be the focus of this study. Each displays varying levels of human impact, and environmental forcings such as freshwater and tidal influxes. The phytoplankton community, both before and after nutrient enrichment experiments, will be examined using light and epifluorescence microscopy techniques. Characterization of the community is a useful indicator, providing insight into the potential for harmful algal blooms as well as predicting shifts diversity and dominance. The results of this study will allow for regional characterization of sensitivity to elevated nutrient loading. Preliminary results will be discussed.

17. Joshua T. Neese
William F. Patterson III

Joseph H. Tarnecki
Department of Biology

Currently, insufficient data exist in many artificial reef systems to evaluate the ecologicalversus fishery role of reefs. This was examined in terms of the differences in red snapper growth at age between natural and artificial reefs. Otoliths were removed from the fish and their annuli were read to determine age. Red snapper sagittae were embedded in epoxy and sectioned through their core with an Isomet low-speed saw. Otolith sections were ~500 µm thick and were glued to microscope slides with Cytoseal adhesive. Fish were aged by counting opaque zones in otolith sections. An algorithm was used to assign fractional age based on number of opaque zones observed, marginal condition (opaque or translucent), and date of sampling. Size at age was plotted separately for red snapper captured at natural versus artificial reefs. A linear regression was fit to each plots, as well as to the combined data, and a likelihood ratio test was computed in Excel to test if slopes, hence growth rates, were significantly different between habitat types. This data was compared to a similar study from 2001 to gauge if growth rates have changed or if cohorts have begun to recover from years of overfishing.

18. Efficiency of light sources for PMA activation to distinguish live vs. dead cells using qPCR

Elizabeth Kennedy, Karen Cravero, Kristen Hellein
Joe Eugene Lepo
Department of Biology

A limitation of DNA-based molecular methods is the inability to distinguish between viable and membrane-compromised ("dead") cells. The DNA binding dye propidium monoazide (PMA) is preferentially excluded from live cells and has been successfully used to differentiate between viable and dead cells in combination with PCR/qPCR. Current literature on PMA-PCR/qPCR varies in the type of light source used to activate PMA. Most often, a 600W halogen lamp is used, with a few others using blue light-emitting diodes (LEDs). High-wattage halogen lamps generate heat that may compromise cell membranes, inflating the observed effect of PMA. Blue LEDs emit light that most efficiently activates PMA, without generating heat and are less expensive than are halogen lamps. Here we compare three light sources: a halogen lamp, an array of 16 blue LEDs focused onto a single sample with a magnifying lens, and an aquarium light strip of four separated LEDs, each mounted in a parabolic reflector (Powerbrite™). We found that the Powerbrite™ treatment was superior to the array because i) the parabolic reflector focuses the light more efficiently, providing more intense light; ii) the apparatus was capable of treating four samples simultaneously.

19. Hunting for a Tubby Homolog in Tribolim casteneum

Thomas Stephenson, Rainey Booth, Nicholas Spencer
Department of Biology

The focus of our research is on the conservation of a gene known as Tubby (Tb). Previous studies have shown that in the fruit fly Drosophila melanogaster, Tubby (Tb) mutants express a reduced axial ratio (length/width) in both larvae and adults, suggesting a malfunction of cuticle size regulation. Our goal is to identify the Tubby homolog in the red flour beetle

Tribolium casteneum and to examine its effect on the Tribolium's cuticle formation using a technique known as RNA interference (RNAi). Results from this experiment will aid in the ongoing process of defining the mechanisms involved in the cuticle formation of insects.

20. Regional differences in age growth, and mortality of Gulf of Mexico gray triggerfish, Balistes capriscus.

Fioramonti, C., R. Allman, W. Patterson
1. NOAA Fisheries, 3500 Delwood Beach Road, Panama City, Florida 32408
2. Department of Biology

Gray triggerfish (n = 1,436) were sampled from 2003 to 2008 along the west Florida shelf from recreational and commercial hook and line and commercial long-line fisheries, as well as from fishery-independent sources. Fork length (FL) ranged from 75 to 697 mm (mean = 353 mm). Translucent zones in dorsal spine sections were validated as annuli by marking captive fish (n = 4) exposed to natural conditions with oxytetracycline; thus, spines sections were used to age fish. Age ranged from 0 to 14 y with a mean of 4.1 y for recreational hook and line, 4.6 y for commercial hook and line, and 6.7 y for commercial long-line samples. Mean age of fishery-independent samples was 3.8 y for hook and line, 3.4 y for trap, and 1.3 y for trawl gears. Gray triggerfish entered the commercial hook and line and recreational fisheries by age 3 and the commercial long-line fishery by age 7. A von Bertalanffy growth function was fitted to triggerfish FL at age data, resulting in a model with $L_t = 1824\ [1\text{-}e^{-(0.03(t+3.99))}]$. Fits of additional growth functions are being explored and will be presented, as well as regional differences in age, growth, and mortality.

21. Coquina clams (Donax variabilis) as indicators of coastal hydrocarbon contamination.

Christina Welch, Gracie Exline
Department of Biology

This research is directly related to the 2010 Gulf of Mexico oil spill, exploring the use of Coquina clam tissue as a biological indicator of marine pollution. Coquina clams (Donax variabilis) are found in the intertidal zone throughout the Southeastern Region of the United States. As filter feeding mollusks they bioaccumulate toxins from their environment. Since September 2010, monthly collections have been made to analyze for PAH's in Coquina tissue. Results from this research will provide an indicator of the bioavailability of residual oil compounds present along the affected Florida coastal areas. Coquina sampling is conducted monthly from multiple sites located along Florida Panhandle beaches. These sites include Perdido Key State Park, The UWF property on Santa Rosa Island, Navarre State Park, Topsail Beach State Park, and St Andrews State Park. Approximately 150 coquinas are collected at each location to reach optimal weight for chemical analysis in the lab. The coquinas are extracted from the shell manually and the tissue is weighed and hydrocarbons extracted for analysis. Our expectation is that Donax variabilis will be a sensitive biological indicator of marine pollution as related to the Deepwater Horizon oil spill.

22. Detection of phosphoinositide-binding proteins in Tetrahymena vorax using liposomes as an affinity matrix

Thomas M. Yarbrough, Phillip E. Ryals
Department of Biology

Tetrahymena vorax, a unicellular eukaryotic organism, was used to identify the presence of proteins that bind to inositol-containing phospholipids. T. vorax can be induced by stomatin to differentiate from a microstomal cell to a macrostomal cell, allowing them to engulf larger cells. Cultures of T. vorax were homogenized at mid-logarithmic growth phase, and their microsomal fractions isolated by ultracentrifugation, carbonate extraction, and dialysis. Microsomal protein samples were incubated with control liposomes containing four lipids common to all eukaryotes and experimental liposomes containing the same lipids in addition to a phosphoinositide. Samples were run on polyacrylamide gel electrophoresis and stained with SYPRO-Ruby. Preliminary results show two bands with molecular weights of 44 kDa and 49.5 kDa in the experimental lanes that are greater in intensity than the control lanes, suggesting phosphoinositide-binding proteins are evident in the microsomal protein samples. Further investigation of phosphoinositide-binding proteins is planned using macrostomal populations and temperature treated microstomal populations of Tetrahymena patula. Phosphoinositide-binding proteins are likely to be involved in the differentiation process of Tetrahymena spp., and their presence may provide clues to a better understanding of the mechanism controlling differentiation.

23. Effects of Lithium Chloride and Valproic Acid on Phospholipid Composition of Tetrahymena patula

An L. Lawrence, Phillip E. Ryals
Department of Biology

Morphological changes occur in Tetrahymena patula through transmembrane signaling events that affect oral apparatus structure due to a response to lithium chloride (LiCl) and valproic acid (VPA). Both are common treatments of bipolar disorder and have been shown to alter phospholipid composition; however, not much is known about the specific mechanisms involved. T. patula dedifferentiate from a macrostomal to microstomal state in response to 20mM LiCl and 250µM VPA treatments for 24 hrs. To separate polar lipid classes, thin-layer chromatography was performed in a chloroform/acetic acid/methanol/water (75:25:5:2.2) mobile phase. Phospholipid composition was determined by phosphorus assay. Total phospholipid was separated with Jolles solvent to resolve phosphoinositides (Jolles et al., 1981). Analysis indicates an increase of aminoethylphosphonolipid in both LiCl (26.5% ± 1.86) and VPA treatments (33.2% ± 3.30) compared to the control (21.6% ± 1.56). Sphingolipid for LiCl treated (19.8% ± 1.36) cells decreased in comparison to the control (24.0% ± 1.30). Densitometry analysis shows consistent percentages of phosphoinositide types between control and treatment groups. Data suggests that both LiCl and VPA treatments induce a response in phospholipids in T. patula. The possibility exists that the mechanisms involved in the cellular response to these compounds may involve phospholipid interaction.

24. The effects of lithium and valproic acid on protein phosphorylation in Tetrahymena patula

Katie C. Sprinkel, Phillip E. Ryals
Department of Biology

Lithium and valproic acid (VPA) are common treatments for bipolar disorder, yet their biochemical mechanisms remain unclear. This research seeks to test the hypothesis that lithium chloride (LiCl) and VPA will induce Tetrahymena patula to alter morphology from a macrostomal to a microstomal phenotype through forced dedifferentiation. The effects of MgCl2, a known competitor of lithium on phosphoglucomutase, were examined. Cultures of T. patula were treated for 24 h and examined for phenotype. Cell count data shows that controls contained 7.9 ± 2.5% microstomes, 20 mM LiCl induced 55.2 ± 18% microstomes, 500 mM VPA induced 20.0 ± 5.2% microstomes and 20 mM LiCl + 20 mM MgCl2 induced 42.2 ± 16% microstomes. Protein samples were collected. Sodium dodecyl sulfate polyacrylamide gel electrophoresis was performed and gels were stained using Pro-Q Diamond and Sypro stains to visualize the change in phosphorylated and total proteins, respectively. Gel Imaging Software showed that a 49 kDa band in control samples yielded 14.6 ± 1.3% pixellation. LiCl treatments resulted in 19.3 ± 1.2% pixellation and VPA, 24.0±1.7%. LiCl + MgCl2 resulted in 14.7 ± 1.3% pixellation. Early findings suggest increases in the phosphorylation of a 49 kDa protein with treatments of LiCl and VPA, and inhibition of the effect of LiCl on phosphorylation by MgCl2.

25. Designing, Assembling and Integrating a High Vacuum System on a MALDI Reflectron-Time-of-Flight Mass Spectrometer

Georgia Boles, Jonathan Buttrick, Jessica Carter, Nickolas Zingaretti, Karen S. Molek
Department of Chemistry

A vaporized sample in a mass spectrometer produces gaseous phase molecules which are accelerated towards the detector, where the ion separation occurs according to their mass to charge ratios. This process must happen at a very low pressure which requires the use of a vacuum system. At extremely low pressures, gas molecules travel without interference from collisions, preventing them from reacting or changing direction. Typical vacuum systems consist of a high vacuum diffusion pump in connection with a roughing pump in order to reduce the atmospheric pressure to the necessary operating pressure. Our Matrix Assisted Laser Desorption Ionization Reflectron-Time-of-Flight mass spectrometer (MALDI-RTOF MS) was equipped with two diffusion pumps each backed by two rotary pumps. The rotary vacuum pumps used—an Edwards E2M2, E2M8, and RV8, a Precision Scientific P100, and an Alcatel 2012A—reduced atmospheric pressure to a range of 7.5x10-5 to 2.3x10-2 torr. The diffusion pumps continued to reduce the pressure to about 7.5x10-7 to 8.0x10-9 torr until a high vacuum was achieved. With an efficient vacuum system in place, the mass spectrometer can then be used to determine the composition and mass of the sample.

26. Using ICP/MS to Determine the Efficiency of Various Materials for Metal Remediation

Chelsie L. Beck, Maureen P. Bruns, Pamela P. Vaughan
Department of Chemistry

Potentially harmful heavy metals can bio-accumulate in organisms and many have been found to be toxic and/or carcinogenic. The determination of a method to quickly and effectively produce clean, drinkable water is the desired application of this study. In this study, contaminated water collected from a shipyard was examined. Various materials (chitosan, mixed bead and amphoteric resins) were tested to determine their efficiency for metals remediation. Inductively coupled plasma atomic emission and mass spectroscopy (ICP/AES; ICP/MS) were used to quantify elements found in the water and to determine the remediation efficiency of the materials examined. The trends show that the amphoteric consistently removes U and Mn well and does not

remove cobalt well. The mixed bead resin consistently removes Mn, Cu, and Cr but not Co. Both amphoteric and mixed bead resins have strong potential for remediation of heavy metals. Chitosan proved ineffective at metals removal.

27. Polymerization of 3-Oxetanol

Cholena Russo, Mitra Vashi
Tim Royappa
Department of Chemistry

Poly(3-oxetanol), a hyperbranched polyether-polyol, was synthesized by boron trifluoride-catalyzed cationic ring-opening polymerization in dichloromethane. This polymer is an analog of the more well-studied polymer, polyglycidol. Both polyglycidol and poly(3-oxetanol) are hyperbranched polymers. Because of this, and also since both these polymers are formed from monomers that may be considered anhydrides of the biocompatible molecule glycerol, they are under consideration for biomedical applications such as drug delivery. The spectral and thermal properties of poly(3-oxetanol) were analyzed and compared to those of polyglycidol.

28. Isolation and characterization of Polynuclear Aromatic Hydrocarbons from Donax Variabalis affected by the gulf oil spill

Robert Pelot, Alexandra Vestal , Melissa Hagy
Frederick Hileman
Center for Diagnostics and Bioremediation

Polynuclear Aromatic Hydrocarbons (PNAs) are a large class of compounds commonly associated with crude oil. Coquinas (Donax Variabalis) are small bivalves inhabiting the intertidal zone. Coquinas lack the enzymes to properly metabolize PNAs, making them a promising indicator species for crude oil. Utilizing extraction techniques developed for larger bivalves, hydrocarbons were extracted from the tissue in ethanolic KOH, followed by Hexane. Isotopically labeled PNAs from each of the representative classes were also employed in the extraction for quality control and quantification purposes. Alumina chromatography was used to separate biologics from the hydrocarbons. This was followed by silica chromatography to isolate the PNAs from other classes of hydrocarbon. The resultant product was characterized using gas chromatography – mass spectrometry on selected ion monitoring mode. Early results show coquinas harvested from the Pensacola area contain a PNA fingerprint very similar to BP oil. Because of the location of coquinas in the intertidal zone, future impacts of oil contamination along the gulf coast and eastern seaboard may be better identified.

29. Seasonal Patterns of Ultraviolet Photo-protective Pigments in Phytoplankton

Holly Prochazka, Kyrsten McKeand, Sharon Blackwell, Jennifer Glancy, Victoria Singletary, Wade Jeffrey, Pamela Vaughan
Department of Chemistry
Center for Diagnostics and Bioremediation

Climate change manifesting in ocean acidification, increased temperature and higher UV levels through stratospheric ozone depletion has fueled recent research interest into the effects of these factors on the organisms responsible for critical biogeochemical cycles. It is important to understand this protection response and how natural variations in UV exposure, temperature, salinity and nutrient availability influence the efficiency of this process. HPLC analysis with absorbance and fluorescence detection has been used to quantitatively determine levels of phytoplankton pigments in water samples from Blackwater River, Escambia Bay, and the Gulf of Mexico. Chlorophyll a and chlorophyll b were quantified directly and accessory pigment production ratios relative to chl a. This information along with UV/VIS light intensity will be used to follow the seasonal patterns of phytoplankton pigment production.

30. Synthesis and Hydrogen Bonding Studies of New 9-Dipyrrinone Carboxylic Acid Derivatives

Dolan Dean, Stephani Spiegel, Luis Flores, Korry Barnes, Michael T. Huggins
Department of Chemistry

Hydrogen bonding between carboxylic acid and dipyrrinone groups has been well documented for a variety of a dipyrrinones with carboxylic acids attached at various positions along the dipyrrinone core. Based on the attachment point and length of the tether between the carboxylic acid and dipyrrinones, various self-associated aggregation states have been observed for these systems, all displaying a dipyrrinone to acid hydrogen bonding motif. In this research, we are exploring the 9-dipyrrinone carboxylic acid derivatives to better understand their supramolecular structure – aggregation state, strength of self-association, etc. A series of 9-dipyrrinone carboxylic acid with amide functionality in the 7-position have been prepared to improve solubility and provide an opportunity to building larger supramolecular systems using the dipyrrinone to carboxylic acid hydrogen bonding as the building blocks. The synthesis and characterization of these new dipyrrinone systems will be presented.

31. Fluorescent detection of organophospate chemical warfare agents

Deborah Barkley, Ian Walton,
*Michael T. Huggins**
Department of Chemistry

Sarin gas is a potent nerve agent developed in 1939 by the German for use as a weapon of mass destruction. The goal of the project is to develop a new molecular system that reacts with the phosphorus center in nerve agents such as sarin gas and yields an optical response indicating the presence of the nerve agent. Ideally, an "off" to "on" optical response provides the best system. The target molecule, a novel fluorescent dipyrrinone analog, was selected for its high extinction coefficient as well as its decent quantum yield. The target oxime was synthesized in four synthetic steps. Initial results of the studies from this system will be presented.

32. Examination of Triclosan Photo-degradation with Varied Salinity and Organic Matter Content

Janae Baptiste, Paulie Burns, Amber McCarver, Pamela Vaughan
Department of Chemistry

Triclosan is a bactericide used in a variety of personal care products such as toothpastes, deodorants, and hand soaps. After its initial use, the antimicrobial agent enters the waste stream but fails to be removed during waste water treatment. When Triclosan reaches the environment it continues to kill naturally occurring bacteria, and photo-degrades to 2,7/2,8-dibenzodichloro-p-dioxin. These dixoins are part of a class of compounds which are extremely toxic to plant, animal, and human life. A study found that the half-life of Triclosan is 8 days in freshwater while only 4 days in seawater. The intent of this investigation is to determine why Triclosan degrades to dioxins faster in seawater than in freshwater. This was achieved through determining how salt content and organic matter content influenced the rate of decay of Triclosan. Samples containing Triclosan were adjusted using artificial seawater with and without the presence of organic then exposed to UV/VIS light. There appears to be enhanced UV degradation of Triclosan when salinity is increased by 8 ppt.

33. Florida's Juvenile Justice System: Why are Children in Adult Prisons?

Mary K. Jones
Criminal Justice Program

In the state of Florida there are minor children serving time in adult prisons. This study will review the history of the Florida juvenile justice system and the rules which govern the transfer of minor children to adult court in Florida today. Through personal interviews with judges, prosecutors, defense attorneys and a law professor, this study will examine why the state of Florida currently has the highest number of minor children serving time in adult prisons.

34. A Preliminary Analysis of Employment Opportunities for Offenders in Northwest Florida

Danielle Butler, Justin Flynn, Laura Groat, Brittany Hoyt, David Morrell, Amanda Tryling, Robert Zuchowski, Dr. Cheryl Swanson
School of Justice Studies and Social Work

With over 2 million individuals currently incarcerated and 750,000 inmates released last year, important issues are raised about the consequences of large numbers of former inmates returning to their communities. The success of these individuals in finding housing, employment and other kinds of social support impacts on community safety. Because state budgets are in crisis and prison systems can the high recidivism found among formerly incarcerated felons, prison administrators and community groups are ecoming more involved with prison reentry issues. The Northwest Florida Reentry Task Force is one such organization that seeks to assist reentrants with family issues, employment, behavior change, and housing. This study reports on a survey of employer attitudes toward hiring reentrants in the Pensacola area. A survey questionnaire was developed to identify whether employers are willing to hire former felons, the extent to which they do hire former felons, perceived barriers to hiring former felons, and knowledge of federal incentives to hire former felons. The study is part of a class project in Ethics and the Justice System whereby student are examining the issue of what our social responsibility is to formerly incarcerated persons.

35. Prevalence of Corn in Today's Economy

Ruth Ashley, Tabatha Ducharme
Department of Economics

The amount of corn American industries produce yearly is enormous. Of that corn, only a small percentage is edible in its original state; the rest is used for energy (ethanol), natural flavoring, corn syrups, and fuel for livestock. Walking through a grocery store and flipping "ingredient" labels reveals the massive market of corn starch, glucoamylase, high-fructose corn syrup, and more corn-based products. Cattle are no longer raised in pastures and the rise of concentrated animal feeding operations (CAFO's) spur the consumption of corn as it is a catalyst to the dairy yield and the fattening process of cattle. These by-products of maize are stimulating the economy of the United

States as well as the rest of the world. Debates among scientists argue if such massive quantities of corn in today's diet are hazardous or beneficial to our health. Meanwhile, agricultural policy-makers discuss if this corn production is healthy for the environment and/or necessary for the economy to prosper. This visual representation brings awareness to the true statistics of the politics of corn.

36. Hardware and Software Interfacing of a Real-Time Indoor Navigation System: Auto-pilot Reconnaissance Quad-Copter

Michel Starr, Brandon Walker
Department of Electrical and Computer Engineering

Our Capstone Design project for Electrical and Computer Engineering will utilize a quad-rotor helicopter to accomplish indoor reconnaissance missions. This year-long project will be in the technical design and development stages during the time of presentation. Microprocessors onboard the quad-copter will be updated with a navigational checkpoint file at that time. The microprocessors will intervene with the pre-fabricated navigational controls of the quad-copter to maintain flight. During flight, the quad-copter will travel along the designated pathway (via checkpoints) while avoiding obstacles and maintaining an adequate flight distance away from walls. The on-board camera will send digital images to an off-site computer; this off-site computer will implement MATLAB (MATrix LABoratory) mathematical software to analyze the images for a desired target specified by the programmer. In addition to visual targets, nonvisual sensors can be implemented to inform the user of other environmental hazards (e.g. carbon monoxide gas). The navigational, imagery, and sensory analyses done by the quad-copter and off-site computer will be completely autonomous once all of the hardware and software designs are incorporated for a complete design.

37. ATLAS: All-Terrain Land Autonomous Scout

Kevin Denney, Joshua Mathis, Daniel Skrabacz, Roman Tillman, Phillip Nadenbousch
Department of Electrical Engineering

Using a chassis developed from a previous UWF project, the ATLAS team will create a robot that will serve the purpose of a military scout. The ATLAS will be able to navigate a series of waypoints provided from an Operator Control Unit using GPS. The robot will also be able to avoid obstacles through a series of infrared sensors located at the front of the vehicle. In case of emergencies, the operator has the ability to take control of the robot manually and steer it to a safe location. An onboard camera will allow the user to make sure that the robot is indeed headed in the right direction and avoiding any obstacles that may be in its path. All of the data obtained will be transmitted wirelessly from the host computer located inside the ATLAS to a base station. The brains of the operation will be a National Instruments CompactRIO, which is a Programmable Automation Controller. The controller is capable of extensive hardware and software interfacing through its robust modules, Field Programmable Gate Array and its LabVIEW graphical software system. ATLAS will employ a modular design, which will allow it to be used for future projects at the UWF REEF campus.

38. iRobot Create: Traffic Simulations

Joshua Davis, Michel Starr, Brandon Walker, Anton Yaresko
Department of Electrical Engineering

Using a robot similar to the autonomous Roomba vacuum cleaner, the iRobot Create platform can be used to simulate the complexity of operating a vehicle through small scale traffic situations. As an idea to promote traffic safety, the iRobot is used to demonstrate a model for driving assistance by navigating along a test track. Through an on-board camera and proximity sensor, the iRobot collects information about its surroundings and communicates that information through a serial connection to a central processor running in MATLAB. Autonomously, the iRobot decides when to brake at stop signs, which direction to turn when approaching intersections, and how to make proper lane changes to avoid other vehicles. The iRobot is equipped with brake lights, turn signals, and automatic headlamps which represent an automobile's light communication and safety devices. The on-board camera is mounted on a stepper motor so that it is capable of rotational motion providing 360o of vision reducing blind spots.

39. Autonomous Research Surface Vessel

Anton V. Yaresko, Alexander B. Keyhani
Department of Electrical Engineering

The Autonomous Research Surface Vessel is a fully-autonomous and fullyelectric marine robot which will aid in the advancement of environmental science and water research. The main task of this autonomous vessel is to collect water samples from different user-specified locations within a large body of water such as a river, a lake, or an ocean. The vessel will accept user-input GEO coordinate locations (Latitude, Longitude), which will then be utilized by a global positioning system (GPS) in order to precisely navigate to each designated point. After reaching each location, the vessel will collect the required data and water samples andcomplete the sampling route by returning to the starting point. A variety of electronic subsystems and software applications will be used in order to implement the full functionality of this device, such as the following: motion/direction controls, visual end-user interface, situational awareness algorithms, and combination of "green" power from solar panels and Li-Ion rechargeable batteries. This project is a collaboration of the Electrical Engineering and Environmental Studies departments with a main objective of promoting education, engineering, and environmental studies.

40. High-Speed Video Camera Frame-Rate Validation

Jarrod Donald Palmer
Department of Electrical and Computer Engineering

This document details the design of a system to validate several parameters of the frame rate of a high-speed video camera. The system allows the user to determine the actual frame rate, the duration of each frame, and the delay of each frame. This is specifically designed for cameras with frame rates of up to 1000 frames per second. Ideally, this would be used to verify that the camera is capturing and recording 1000 frames per second, as well as to verify that the time stamp of each frame is accurate. Such a system would be useful for companies and organizations that use high-quality video recording on a regular basis. This system would allow them to determine the accuracy of their video recordings.

41. Alternative Energy: Coast to Coast

Jessica Engel
Department of Environmental Studies

Nonrenewable sources have been the standard for providing energy; yet, increased research has provided opportunities for energy development that are renewable and have less harmful environmental impacts. Scholars from many different backgrounds from politicians to economists to scientists study alternative energy, and with every single one, there is another opinion. The main alternative sources on the horizon today are biomass, wind, geothermal, hydroelectric, and solar. Alternative energy sources currently being supported, and their environmental impacts were investigated. Conclusions were drawn based on the sources that provide the most potential to compete with the high demand for energy by interviewing experts in the field and consulting additional websites and articles on alternative energy. A filmed documentary was created based on tours and interviews of the geothermal, wind, and hydroelectric plants and additional literature research to demonstrate the benefits and drawbacks of alternative energy sources.

42. Initial Changes in Soil Quality Characteristics Due to Mob Grazing

Maureen Harrington
Department of Environmental Studies

This study examines the initial soil quality changes in pasture land of Walnut Hill, Florida due to the adoption of a sustainable agricultural practice, mob grazing. Due to the adverse effects associated with traditional grazing methods on soil quality and the widespread production of cattle in Florida, the determination of sustainable techniques to reduce the ecological impacts of livestock grazing is important. Therefore, rigorous analysis of mob grazing practices is essential to advancing ecological integrity and scientific innovation in our geographic region and elsewhere. Soil quality characteristics measured include: soil respiration; bulk density; earthworm population estimates; and nutrient status. The evaluation of each soil characteristic will be triplicated on two soil types for both conventional and mob grazed pasture sites. Change in the characteristics will be determined from comparisons between areas of conventional pasture and mob grazed pasture on the same soil type. Changes over time in rooting length of plants in the mob grazed sites will also be determined. The results from this study may be employed in farmer education and outreach promoting the environmental benefits of sustainable agriculture practices.

43. Effects of Mob Grazing on Soil Quality

Hallie Johnson, Johan Liebens
Department of Environmental Studies

Mob grazing is a farming practice that involves concentrated grazing on small plots of land over a short period of time. Although farmers have noted a positive impact on their land the implications of this method for soil quality have not been thoroughly researched. The intent of this study is to examine and identify the changes in soil quality attributed to mob grazing. Two local soil series were selected for examination in north Escambia County, Fl. Samples of the these soils have been collected in triplicate from areas that have experienced mob grazing, and nearby areas that have not yet. These samples will be tested to determine soil pH, aggregate stability, infiltration capacity and organic material. The results of our work will be examined to identify any changes between soil series and over time in order to determine the impact mob grazing has had in the area. The findings from this work will help expand scientific knowledge on the impact of mob grazing on soil quality and will contribute to the knowledge of the regional farming community.

44. Multidecadal predictability in summer drought variability in the Southeastern United States

Ashley Weatherall, Dr. Jason Ortegren
Department of Environmental Studies

From the 44 state climate divisions comprising the Southeastern U.S., we identified three distinct subregions of homogeneous summer drought variability using Factor Analysis with a Principal Components model. The drought metric was the Palmer Hydrological Drought Index (PHDI) for the period 1895-2008. We labeled the subregions the Southeast Atlantic Coastal States (SEACS), the Eastern Gulf South (EGS), and Florida (FL). Each subregion exhibited multidecadal variability in summer moisture conditions during the observed period. Low-frequency moisture variability in the SEACS is significantly associated with specific ocean-atmosphere oscillations including the Atlantic Multidecadal Oscillation (AMO) and the North Atlantic Subtropical Anticyclone. Neither the EGS nor FL drought variability is significantly ($p = .05$) associated with the climate indexes in this study. This indicates that known relationships between summer drought variability in the Southeastern U.S. and climate indexes are strongly reflected in the SEACS, with weaker and often insignificant signals in the EGS and FL. The results may be useful to water resources managers in the Southeast and may help in drought forecasting and preparedness in a region that suffers from even short-lived summer droughts.

45. The Effects of Fire on Groundwater Chemistry

Stephen Schoen, Dr. Matthew Schwartz
Department of Environmental Studies

Previous research in tropical rainforests indicates that groundwater metals and inorganic nutrients are significantly affected by clearing and burning of the land surface. This project aims at obtaining a greater understanding of the effects fire has on groundwater chemistry. Ground water samples collected from locations where controlled burning has been prescribed and from control sites separate from those burn locations. Samples will be collected through the use of piezometers, which will be installed at a number of sites, including burn and non-burn locations. Groundwater samples will be tested for physical parameters, including turbidity, temperature, salinity and dissolved oxygen, as well as for dissolved inorganic nutrients. Groundwater samples will also be collected from burn and non-burn sites immediately following rain events. It is our belief that the controlled burns will have an impact on ground water chemistry, and that a meteorological event such as rain will increase these effects through leaching.

46. Groundwater Nutrient Variability and the Implications of its Discharge

Mike Koban
Department of Environmental Science

The purpose of this study was to measure the varying concentration of nitrogen and phosphorus at a range of sites near to and within Escambia County, Florida, and to determine their potential impact on the surrounding water bodies once these nutrients are discharged in groundwater. During this experiment, groundwater samples were taken using mini piezometers and analyzed for nitrogen and phosphorus. The concentrations of nitrate, nitrite, ammonium and phosphate for each site were measured using a Shimadzu UV/Vis Spectrophotometer. Then, using data from research in-progress, the influence of these nutrient concentrations was examined in the context of their influence on the local marine ecosystem. This assessment took into special account the N:P ratios displayed at each groundwater sampling site as these ratios can be compared to the Redfield standard which is 16N:1P.

47. Seasonal Variation of Groundwater Discharge and Groundwater Nutrient Inputs of Western Escambia Bay, Florida

Dawn Prince
Department of Environmental Studies

Submarine groundwater discharge (SGD) is a phenomenon in which terrestrial freshwater and recycled seawater circulates freely through continental shelf sediments and reemerges along the coastal zone seafloor. In some cases, SGD can be a more significant contributor of nutrients to estuaries than surrounding rivers. SGD also demonstrates seasonal fluctuation with highest discharge rates and nutrient inputs typically occurring in summer and lowest discharge and nutrient inputs typically occurring in winter. The winter and summer fluxes of SGD and its associated change in nutrient inputs were analyzed for Escambia Bay, Florida. Rates of SGD were determined using a radon mass balance approach and seepage meters. Concentrations of nitrate, nitrite, ammonium, and phosphate were determined in groundwaters, porewaters, and surface waters using spectrophotometric analysis. Concentrations of nutrients were multiplied by SGD rates to determine nutrient inputs into Escambia Bay and comparisons were made between SGD rates and nutrient inputs for summer and winter seasons.

48. Examination of Longleaf Pine Savanna Restoration on the University of West Florida and Suggestions for Improved Results.

David Lee
Department of Environmental Studies

This paper summarizes current literature, and examines current burning procedures, to determine the appropriate techniques to effectively restore a degraded longleaf pine (Pinus palustris) ecosystem located at the University of West Florida, Pensacola FL. The natural range of pristine longleaf savanna habitat once covered 37 million ha in the southeastern United States. Now, only one million ha of this habitat remains. The majority of this remaining habitat continues to be degraded by hardwood infiltration. Current literature suggests that the reintroduction of a natural fire regime as an ecological process to control hardwood domination and understory growth is necessary for regeneration. Depending on the level of degradation of the habitat, other mechanical or herbicidal techniques may be needed. At the University of West Florida, two plots were burned by the Florida Division of Forestry in an effort to restore the natural habitat. The first plot was burned at low intensity and was too patchy for full restoration to be likely. The second plot was more thoroughly burned and may show promising results in the future.

49. Devolution in the United Kingdom: Enhancing or Undermining the State?

Jennifer Reid
Department of Government

I will be presenting on the topic of devolution. I am focusing on the United Kingdom since it is one of the most well-known instances of devolution and was highly controversial in its initial stages. Achieving devolution in the UK required multiple legislative acts and the popular support of the citizenry. I am concentrating on the primary devolved areas of the United Kingdom, which includes Scotland, Wales, and Northern Ireland. I examine the features of devolution and whether the growing powers devolved to these areas are weakening the central government and leading to the break-up of the UK.
I first present the history of the United Kingdom, as it pertains to the inclusion of Scotland, Wales, and Northern Ireland. Next, I examine the crucial legislation that led to devolution and the institutions and powers of each region. I then investigate the problems posed by devolution and focus its effectiveness and how it controls the functioning of the central government. Finally, after examining the problems with devolution in the UK, I assess whether the decision to devolve power was a good choice and the future outlook for devolution in the UK.

50. Civics Education: Comparing Public, Private and Home Settings

Mary Ann Johansen
Department of Government

In 1920, the American Political Science Association created the APSA Committee on Instruction in Political Science (Study of Civics 1922, 116.) In a 1922 article, the Commission presented its suggestions. Among the findings of the Commission was that the study of Civics in American schools, often lost in "the whole range of the social sciences, economics, sociology, ethics and international relations," (Study of Civics 1922, 116) should instead be focused on giving the American pupil "an intelligent conception of the great society of which he is a member, his relation to it, what it requires of him, how it is organized, and what functions it performs." (Study of Civics 1922, 117). The quality and effectiveness of civics education is called into question when political participation is consistently very low (Election statistics 2010). After comparing and contrasting public, private, and home education curriculum and interviewing teachers and students, what can be concluded about the quality and effectiveness of current Civics Education programs in the Northwest Florida area? Using the United States' Citizenship Test, how effective are the curricula in these three areas are at educating Northwest Florida young people about their role in society? Is there a marked difference among the three types of education?

51. The Federalist Debate within the European Union

Jennie Linder Cunningham
Department of Government

This is a comparative study of the current views and state of federalism within European Union and the United States during its Founding Era. Research assumptions are as follows: 1) there are parallels to be drawn between the two governments in terms of democratic institutions; 2) there are significant parallels to be drawn between the Federalist/Anti-Federalist debate in the US at the time of the Founding, and the current pro- and anti-Europe debates in the European Union over the merits of centralization within the organization; 3) trends in the EU indicate an increasingly centralized federal political structure. In this study, a qualitative comparative method is used to evaluate the similarities and differences between the EU today and the US at the Founding Era. Specifically, an institutionalist approach is employed to determine the nature of the political structure of a constitution or constitution-like documents, the legislature, the judiciary, and the interaction between the institutions and the citizens. Findings indicate that

the European Union, both as a static and dynamic institution, strongly resembles in nature the United States around the time of its founding. This suggests a tendency in the European Union towards centralization and confederation, in much the same direction as the United States did two centuries ago. Tentatively, one prediction for the future would be that the EU continue to centralize to some extent through its institutions, but will likely never come to resemble the United States in forming a single state. There is no evidence that Europeans want to completely yield national sovereignty. However, increased benefits of centralization and the self-reinforcing tendency of centralized institutions to better the chances for further centralization suggest a continued centralizing trend in the near future.

52. China's Naval Security Strategy: Peaceful Rise or Looming Threat

Michael Trevathan
Department of Government

This paper endeavors to examine the modernization programs implemented by thePeople's Liberation Army Navy (PLAN) since the end of the Cold War, and by extension what these processes can foretell of China's grand strategic security policy for the Pacific. This exploration will utilize the factors advanced in defensive realist theory, namely: military, diplomatic, domestic, and geographic variables in an attempt to assay China's security ambitions and the (PLAN's) ability to advance and secure these maritime interests for the People's Republic of China (PRC).This investigation will conclude with a series of foreign policy prescriptions which are designed to provide insight on how the United States and its regional partners in the Pacific can help foster a "peaceful rise" of China on its path to great power status.

53. The Politics of Defense Contracting: Assessing the Changes from the 1990's to 2000's

William Nugent
Department of Government

I will be analyzing the relationships between Congress, the Department of Defense, and the defense industry. I will be looking at changes that took place within each of these institutions and how those changes affected the relationship between all of them during this period. The major points of exploration will center on the consolidation of defense contractors in the 1990s to the period of windfall profits for them the 2000s. By looking at these points, and the time between when they occur I hope to be able to explain the behavior of not only the defense industry but also the growing number of other government agencies that contract to outside firms. I also hope this study helps to provide clear insights into the influences that each of these institutions has over the others.

54. Picking Your Battles: How Rational Litigants Shape the PoliticalLandscape by Venue Shopping at the Federal District Court Level

Jessica Hayden
Department of Government

Venue shopping is a common problem at the federal district court level. Rules and precedentboth aim to mitigate the incentives and consequences of this behavior. Nevertheless, venueshopping- when it is an option- is a common and even expected practice among competentattorneys. During this process the laws, precedent, and ideological composition of the availablecourts are taken into consideration. The intention of this paper is to investigate whether and to what extent the ideological composition of the district court affects venue shopping and toexplain the frequency and consequences of this practice when a constitutional question is atstake. The federal district courts in Florida will be used as a case study. A quantitative analysisof the ideological composition of the Florida federal district courts and the ideological slant ofcases containing national-level constitutional questions brought to these courts will beundertaken. By examining this data, a determination will be made concerning both thefrequency and outcome of the process of venue shopping at the federal district court level. Aqualitative analysis of the constitutional challenge to the federal health care law will be used to supplement the quantitative findings.

55. The Deinstitutionalization of Congress

Jennifer Hobbs Fulmer
Department of Government

This article will explore the level of deinstitutionalization of the United States Congress by examining Congressional elections from 1990 to 2010. In his 1968 article, "The Institutionalization of the U.S. House of Representatives," Nelson Polsby identifies three key conditions which signify the presence of institutionalization. By examining conditions which indicate a level of institutionalization, I will determine if the same conditions exist throughout the timeframe indicated. Polsby's methodology for determining institutionalization will serve as the principle methodology to determine if deinstitutionalization has occurred recently. While this article's primary focus is not to theorize on reasons for deinstitutionalization, it will offer some social and political events and climates which may have contributed to any deinstitutionalization.

57. Preceding Judicial Decision-Making

Kyrsten B. York
Department of Government

Attempting to understand the motivations behind judicial decision-making has lead to diversity in the schools of thought. A division often seen within these schools of thought occurs from the use of precedent within judicial decisions. I attempt to answer whether precedent influences judicial decision-making. The scope of the paper is limited to studying the Supreme Court decisions and will focus on the specific issue of Second Amendment rights (subject to change). Understanding whether precedence influences the judicial decision-making process will entail data analysis, which will examine the influence precedence held on the dissenting justices on past court cases. I hope to illustrate that precedence does hold a significant level of influence on the decision-making process within the judiciary. The aim of the paper is to examine the influences on judicial decision-making and understanding the impact precedence may or not have upon this process, which will contribute to the constitutional and practical understanding of the judiciary.

58. United States House of Representatives' District Size: The Inverse Relationship Between District Growth and Representation

Matthew J. Schwalb
Department of Government

Is there a negative relationship between the size of nation's population and the democratic representation it is able to guarantee its citizens? More specifically, as a nation's population grows, how much must its assembly size grow in order to maintain a given quantity of per capita representation? With the enactment of the Apportionment Act of 1911, the U.S. Congress legally mandated to cap its assembly size of the US House of Representatives at 435. Currently, the U.S. House of Representatives' district size is roughly 710,000 citizens per representative. In 1911, the year Congress capped its assembly size, the U.S. House of Representatives' district size was roughly 214,000. This means that a 330% increase in district size has occurred between 1911 and 2010. What consequences does this have on U.S.'s democratic institutions? I will examine how this increase in district size affects the representation, real or perceived, of the US House of Representatives as well as examine the possible effects of increasing the assembly size in proportion to the 1911 district size, an assembly size which would equal 1444. Given that the United States utilizes a majoritarian, single member district electoral system, my aim is not to determine the proportionality of the U.S. system, but rather trace the evolving effects of the drastic increase in district size over the last 99 years.

59.Preserving Historic Foley: the Foley, Alabama, Historic District

Jonathan O'Neil, Adrea Watford, Allison Wolford
Department of History

The City of Foley, Alabama, has requested assistance in evaluating its current historic preservation ordinances. We, as undergraduate Pre-Law students, will assist the aspiring community in exploring various historic preservation ordinances and regulations in an attempt to expand the historical commission's efforts to preserve Foley's unique historical resources. While working with the City of Foley, we will be assigned extensive readings within the field of Historic Preservation Law. Consequently, we will be exposed to all aspects of Historic Preservation Law. We will meet periodically with city representatives that work with the local historical commission and engage in a number of historic preservation activities within the Foley community. Utilizing the class readings and our first-hand accounts, we will evaluate Foley's existing historic preservation laws, and offer suggestions for alterations and additions to its current ordinances. Moreover, this will entail a rigorous exploration of a variety of historic district ordinances that are utilized by local communities within Alabama and Florida. Our research will clearly benefit the City of Foley, the Pre-Law programs of both departments of History and Political Science, and the University of West Florida. Our experience with this program will perpetuate our success in applying to and attending law school.

60. Examining a Treatment for Survivors of Sexual Violence with PTSD Utilizing CBT and Aerobic Exercise

Erika Smith, Petra Schuler, Ludmila Cosio Lima, Robert Rotunda.
Department of Health, Leisure and Exercise Science

This preliminary study examined the impact of an 8-week aerobic exercise treatment on symptoms of Posttraumatic Stress Disorder (PTSD) among a sample of adult women who have experienced sexual violence. Fourteen participants were recruited naturalistically through a Certified Rape Crisis Center in Pensacola, Florida. Participants received cognitive behavioral therapy (CBT) or CBT plus group aerobic exercise sessions (CBT+E). Measures included the Clinician Administered PTSD Scale for DSM-IV – Current and Lifetime Diagnostic Version (CAPS), the PTSD Checklist - Specific Version (PCL-S), and the Symptom Checklist – 90 – Revised (SCL-90-R). Results revealed that both groups improved on all measures: main effects for time and group were observed for the CAPS, PCL-S, and SCL-90-R. Clinical significance was also observed: more participants in CBT+E no longer met the criteria for PTSD at the conclusion of

treatment when comparing CAPS Frequency > 1/Intensity > 2/Total Severity > 65 (F1/I2/TSEV65) scores. Additionally, more participants in CBT+E obtained a clinically significant change in score on the PCL-S. There was also a trend on most measures in favor of the CBT+E treatment group. Results suggest that aerobic exercise programs may be beneficial as an adjunct treatment for individuals diagnosed with PTSD and/or a history of having experienced trauma.

61. The Influence of Unconscious Needs on Hotel Brands

Jennifer Kelly, Xuan Tran
Department of Hospitatlity

The present study explored the relationships between unconscious needs and hotel brands using responses from 277 university students for a pilot test. Subjects were introductory psychology students who were attending in College of Science, College of Business, and College of Professional Studies at the University of West Florida in 2006. One of the classes including 300 students from the three colleges was randomly selected for the Thematic Apperception Test (TAT). The response rate was 92.33% (277/300). The participants completed the Thematic Apperception Test (TAT) and a survey which assessed various hotel brands including Marriott, InterContinental, and Accord. Canonical analysis was conducted to determine which independent variables (need for achievement, need for affiliation, and need for power) were significantly associated with hotel brand names. The findings indicated that 1) people with a high need for affiliation preferred Accord such as Motel 6, Studio 6, etc. 2) individuals with a high need for power indicated a preference for Marriott such as Ritz Carton, J.W, Marriott, etc. and 3) need for achievement scores significantly relate to InterContinental such as Hilton, Crown Plaza, etc,. Unconscious needs and hotel identities are also discussed.

62. Impact of Conscientiousness and Extroversion on Hotel Preferences

Jackie Lee, Xuan Tran
Department of Hospitatlity

The purpose of the paper is to explore the relationship between guests' Conscientiousness and Extroversion and their hotel preferences. Sixty four guests in three hotels in Pensacola, Florida (La Quinta, Crowne Plaza, and Margaritaville) participated in a pilot test from October 1, 2010 to November 15, 2010. The study analyzed the correlations between Conscientiousness and Extroversion of hotel guests (Costa & McCrae, 1992) and their hotel preferences. Multiple linear regressions were conducted. Findings indicate that most guests in a hotel belong to one type of personality and there is a significant association between this type of personality and hotel services. High Conscientiousness people, who strive to find the best values, will stay in a hotel with best price. High Extroversion people, who like to draw attention to themselves, will stay in a luxurious hotel.

63. Avoiding Partial Latin Square Simultaneously

Hannah Berry, Dr. Jaromy Kuhl
Department of Mathematics

Chetwynd and Rhodes proved that 2 partial Latin squares of order 4k are avoidable given that k > 3240. We prove that 2 partial Latin square are avoidable for k >42.

64. Using MATLAB to Solve Real Symmetric Eigenvalue Problems

Tatum Tirado
Department of Mathematics

Eigenvalue problems arise naturally in many areas of science. In this paper, we discuss how to use MATLAB, a well-known software package to compute eigenvalues of real symmetric matrices. In particular, we construct a homotopy from an approximation matrix B to a given matrix A and analyze the paths taken by the eigenvalues as the homotopy parameter t varies. Understanding these (smooth) curves can be useful for calculating the eigenvalues of A based on the eigenvalues of B. We show that the curves are strictly increasing, strictly decreasing, or constant, and that the largest eigenvalue curve is always increasing while the smallest eigenvalue curve is always decreasing. After an eigenvalue is separated, we use MATLAB subroutines to compute approximations of the eigenvalue.

65. The Finite Difference Methods for the Partial Differential Equations

Travis Dimming
Department of Mathematics and Statistics

We study the discretization of the paritial differential equations, in one or two dimensional space. We use the finite difference methods to discretize the problem and error analysis will be given at different cases. Numerical experimental results show the stability and accuracy of the finite difference methods we have applied. The plots of the true solutions and computed solutions will be given. This is the joint work with Dr. Jia Liu.

66. Representation of a flow: The Navier-Stokes equations

Megann Kirk
Department of Mathematics and Statistics

We study the basic properties of the Navier-Stokes equations. We first show how to get the Navier-Stokes equations, then different types of the Navier-Stokes equations are discussed. The solutions of the Navier-Stokes equations including the time –dependent problems are explored. At the end of the paper, the numerical solution methods will be discussed. This is the joint work with Dr. Jia Liu.

67. Differences in Northern Gulf of Mexico Reef Fish Size and Community Structure Before and After the Deepwater Horizon Oil Spill

Kaitlyn Toebe, Joseph Tarnecki
Department of Biology

The overall effects of the sinking of the Deepwater Horizon drilling platform are still unknown, and many projects have been put into place to gain more information. This project compares the reef fish community structure at natural versus artificial reefs in the Northern Gulf of Mexico before and after the Deepwater Horizon Spill. Video was collected from a remotely operated vehicle (ROV) at both artificial and natural reefs in the Northern Gulf of Mexico. Video from these reefs was collected before the oil spill for a different project. The fish size and fish species was compared at each site, and compared to the data collected before the oil spill. Though this project might not give immediate results, it will be a great stepping stone for future research in effects of oil on reefs.

68. Trophic Ecology and Population Dynamics of Tomate, Haemulon aurolineatum, on the Northern Gulf of Mexico Continental Shelf

Michael J. Norberg J.H. Tarnecki J.T. Neese
W.F. Patterson, III
Department of Marine Biology

The tomtate, Haemulon aurolineatum, is a species of reef fish which can be found on approximately 80% of offshore reefs on the northern Gulf of Mexico (GOM) continental shelf. Its ecological importance is apparent given it is among the top ten most abundant and highest biomass species among GOM reef fish communities. However, not much information regarding its specific importance is known. The goal of this study is to examine the trophic ecology and population dynamics of tomtate associated with northern GOM reefs. Specific objectives are to (1) examine the age and growth of tomtate by counting opaque zones in sagittal otolith sections; (2) determine trophic ecology by examining gut content and stable isotope ratios in tomtate muscle tissue; and, (3) analyze remotely operated vehicle (ROV) video samples to compare the abundance of tomtate on artificial versus natural reef systems. Analyses and comparisons continue to be ongoing; however, preliminary results will be presented at the 2011 UWF Student Scholars Symposium.

69. Analysis of the Donax (Mollusca: Bivalvia) populations post Deep-Horizon oil spill from Pensacola Beach & Perdido Key Beach, Florida

Stephanie Witherspoon, Renee Davis, Rebecca Drake, Travis Theriault, Richard Snyder, Christopher Pomory
Department of Marine Biology

Marine bivalves have often been utilized as bioindicators of environmental pollution. Bivalves accumulate contaminants within their tissues, which can be heavy metals, hydrocarbons, and/or various other harmful chemicals present in seawater. Using Donax variabilis as a focal species, this study assessed population changes in Donax post Deep-Horizon oil spill. Monthly sampling of Pensacola and Perdido Key Beaches was conducted at three spatial scales by taking core samples of intertidal zone sediment at high tide. Counts, wet and dry weights were recorded. Over a period of four months significant variability was found at all spatial scales with Perdido Key consistently having lower values.

70. "The Doctrine of Chance:" Why Pascal Made the Wager

Carter Johnson
Department of Philosophy

In all the papers I have read, the authors discussing Pascal's Wager follow the same interpretation. Pascal, they say, formulates an early decision-theoretical matrix which opposed infinite bliss to infinite misery; he wants us to accept theism because atheism might lead to infinite misery. This interpretation makes the Wager the first, and most egoistic, pragmatic argument for belief in God. However, in this paper, I argue that Pascal never meant the Wager to be an argument for belief in God. Examining some of the passages in the Pensees will reveal his true intention.

71. Fluorescence of CdSe nanoparticles in the liquid crystal 8CB near the phase transitions

Jodie Gray, Shane Drye, Darren North, Samuel Beck; Tim Royappa; Laszlo Ujj , Chandra Prayaga,
Department of Physics; Department of Chemistry

The liquid crystal 4'octyl—4-cyanobiphenyl (8CB) doped with cadmium selenide nanoparticles was injected into a commercially available liquid crystal cell

(INSTEC, Inc). The cell was housed in a temperature controlled environment constructed in the lab and exposed to light from a frequency doubled Nd: YAG laser. Fluorescence from the sample was filtered from the incident light and detected using a photodiode and measured with a lock-in amplifier. Measurements have been made over the temperature range 250 to 450C. The sample was stabilized at each temperature, and the fluorescence intensity was measured at several temperatures. The results show a significant change in fluorescence near the nematic-isotropic phase transition. The temperature control and precision allowed more than 1000 data points to be taken between 25-500C, with most of these clustered in the transition region between 38.5– 39.50C, where the change in intensity was observed.

72. Nonlinear Dielectric Response of the Liquid Crystal 8CB Near Phase Transition

Hannah Buchanan, Dr Chandra Prayaga, Dr Laszlo Ujj, Lance Daley, Shane Drye, Tracy Lawson, Michael Kordell
Department of Physics

The nonlinear dielectric response of the liquid crystal (LC) *CB (4'-octyl-4-cyanobiphenyl) was measured near the smectic-nematic and nematic-isotriphic phase transitions. The sample was filled in a commercially available LC capacitor cell of dimensions (1 cm x 1 cm x 9microm). The cell was mounted in a temperature-controlled environment with a stability and resolution of 1mK. The capacitance of the cell was measured at different temperatures in the range 25 – 45 degree C covering both phase transitions, and over a range of frequencies up to 100 kHz, and a signal level in the range of 0 – 5 V, using a lock-in amplifier (SRS830) and LCR meter (Fluke PM6304). Nonlinear effects were observed in the capacitance, both linear and nonlinear, were observed in the nematic phase, near each phase transition.

73. Spectral Measurements of Fluorescence of CdSe nanoparticles in Liquid Crystals near Phase Transitions

Samuel Beck, Jodie Gray, Darren North, Shane Drye, Chandra Prayaga, Laszlo Ujj, Dr. Timoti Royappa
Department of Physics

The liquid crystal 4'octyl-4-cyanobiphenyl (8CB) doped with cadmium selenide nanoparticles was injected into a commercially available liquid crystal cell (INSTEC, Inc). The cell was housed in a temperature controlled environment constructed in the lab and exposed to light from a frequency doubled Nd: YAG laser. The spectrum of fluorescence from the sample was measured at several temperatures over the range 250 to 450C, covering the smectic-nematic and nematic-isotropic phase transitions. The sample was held at each temperature with a precision and resolution of 1mK before taking the spectrum. It was therefore possible to approach very close to the phase transitions. The results show a significant change in the fluorescence spectrum near the nematic-isotropic phase transition.

74. Fluorescence decay of CdSe nanoparticles in Liquid Crystals near Phase Transitions

Darren North, Samuel Beck, Jodie Gray, Shane Drye, Dr. Prayaga, Dr. Ujj, Dr. Royappa
Department of Physics

The liquid crystal 4'octyl-4-cyanobiphenyl (8CB) doped with cadmium selenide nanoparticles (Sigma-Aldrich) was injected into a commercially available liquid crystal cell (INSTEC, Inc). The cell was housed in a temperature controlled environment constructed in the lab and exposed to light from a frequency doubled pulsed Nd: YAG laser. The decay of fluorescence from the sample was measured at several temperatures over the range 250 to 450C, covering the smectic-nematic and nematic-isotropic phase transitions. The sample was held at each temperature with a stability and resolution of 1mK before taking the measurement. The fluorescence was detected using a high-speed detector and the decay was measured using a boxcar averager. With the temperature control available, it was possible to approach very close to the phase transitions, with milliKelvin resolution. The results show a significant change in the decay of fluorescence near the nematic-isotropic phase transition.

75. Automation of the Dielectric Characterization of Liquid Crystals

Shane Drye, Lance Daley, Hannah Buchanan, Dr. Chandra Prayaga, Dr Josaphat Uvah
Department of Physics; Department of Mathematics

This report describes the complete automation of an experimental setup for the dielectric characterization of liquid crystals. In the experiment, a capacitor cell filled with the liquid crystal 8CB has its temperature varied with a precision of 0.001K. The purpose is to measure the dielectric properties of the liquid crystal with respect to its' temperature sensitive phase transitions. The capacitor is connected as part of a high-pass filter circuit. A n Agilent 4395A Network Analyzer has been introduced to the experimental set up to provide a wider range of frequencies (up to 500MHz) to measure the output of the filter at different temperatures. In this work, the process has been automated. The instruments are connected in parallel to a computer through a GPIB (IEEE-488) interface. The program has been designed using Labview to control the instruments through the GPIB, send commands and inputs, receive data, and plot the data automatically. The list of temperatures and frequencies are input through a spreadsheet at the beginning of the experiment. The computer sends these inputs to the appropriate instruments, cycles them through the entire process, saves the data in an output spreadsheet, and plots the data.

76. Development of a high-resolution quartz AC susceptometer for materials magnetic property investigation, research training and science education

Sean Heffernan, Neil Baumann, Branwyn Holmes, William Nelson Christopher Weckerly, Guoqing Wu
Department of Physics

The AC magnetic susceptibility is an important probe for characterizing magnetic properties of many materials. In this effort, an innovative high-resolution quartz AC susceptometer is constructed. It provides us a capability to conduct state-of-the art experiments in AC magnetometry for materials magnetic property investigation associated with important physics such as that of colossal magnetoresistance, superconductivity, charge/spin density wave and phase transitions occurring in novel condensed matter materials, and satisfies the needs of students' research training and education in experimental sciences.

77. Design of a Labview controlled automatic electrical resistivity measurement and data taken system for science research and education

Branwyn Holmes, Lena Ibrahim, William Nelson, Sean Heffernan, Neil Baumann, Christopher Weckerly, Guoqing Wu
Department of Physics

A Labview controlled automatic electrical resistivity measurement and data taken system is developed. We use it successfully for the automatic controlled measurement of materials electrical resistivity as a function of temperature for material electrical property investigation. The system program can also be easily applied for other types of automatic experimental control and data taken with simple modification corresponding to the required measuring equipment. Thus the system can be widely used for research and education for undergraduate and graduate students across the sciences.

78. The calculation of demagnetization field distribution in paramagnetic materials with spherical sample geometries

Christopher Weckerly, Sean Heffernan, William Nelson, Branwyn Holmes, Neil Baumann, Guoqing Wu
Department of Physics

A general method for the calculation of distribution of demagnetization field in paramagnetic materials is described, and the demagnetization field is calculated for samples with spherical geometries. The results show high non-uniformity for the demagnetization field inside the sample depending on the sample aspect ratio and the direction of the externally applied magnetic field.

79. Mathematical Model for Investing the Performance Characteristics of Tunable Distributed Feed back Dye Lasers

Matthew Vaughn, Ross Dickinson, and Laszlo Ujj
Department of Mathematics; Department of Physics

A mathematical model is developed, in Maplesoft Maple 13, for a tunable Distributed Feedback Dye Laser (DFDL)[1] [3][4], capable of generating picosecond pluses in the microjoule energy range. The model based upon rate equations describing the molecular population dynamics involved in the operation of the laser. This effort describes, from past work [3], a laser functioning by interfering laser beams creating Bragg scattering, to produce spacial modulations in the index of refraction and the optical gain of the active medium; this laser can have the effect of shorting the wave pulse by an three orders of magnitude. This model can be extended to design a new laser producing broadband radiation on the picosecond time scale. Numerical methods [2] are used to evaluate physical parameters requisite to the design of the broadband laser. Experimental data is generated locally using a prototype DFDL built in the UWF Physics Department's Laser Laboratory.

80. Development of a Users' Trust Model in Ubiquitous Commerce

Hi Tran, June Wei
Department of Management & MIS

This research investigates the factors that impacting the adoption of ubiquitous commerce with a focus on users' trust in privacy and security. First, a framework is developed to show the interrelationships among users' trust, privacy and security on the adoption of ubiquitous commerce. The precedent factors that affecting privacy and security are also analyzed, including technology familiarity, social presence, and legislation and policy. A survey method is developed in order to quantitatively measure these factors. A

pilot study shows that the majority of these measurements are important to the adoption of ubiquitous commerce. The results will be beneficial to managers and ubiquitous commerce developers when make decisions on the development of the system; and thereby, accelerate the adoption of ubiquitous commerce.

81. Development of a Mobile Pills Framework

Nien-Chieh Lee, Hi Tran, Albert Yin, June Wei
Department of Management & MIS

This paper aims at developing a mobile pills framework in the electronic healthcare by using mobile information technologies. Specifically, an electronic based framework is developed to show how mobile information technology and information system can be adopted in mobile pills. Then, a set of usability solution items are developed based on this framework. A prototype was created to show the real implementation of an m-pill system with these important features. The findings from this paper will be helpful to managers when making decisions on m-pills development.

82. Practicing What We Preach: How Leadership Skills Can Change the Quality of a College Education

Anna Covington
Department of Management and MIS

Over the years, the management discipline has harbored a rather tenuous relationship with the emerging field of leadership. In Management programs, leadership is thought of as something students should have or develop if they hope to be very successful in their chosen careers. In recent years, however, the business model has been extended to the college classroom. Many scholars have argued for the business metaphor in their classrooms by arguing that students should be viewed as clients or customers as they "manage" student learning. Other scholars propose that students should be viewed as "employees" and college professors as "managers" and that they should apply performance management (PM) techniques to maximizing this valuable resource. I present the professor as leader metaphor as an improvement over the classroom management analogy. I take the position that establishing a psychological contract of mutual expectations will merely tend to promote the status quo, but it should be the professoriate's goal to promote change or improvement in the classroom. I propose to apply leadership values, like change, difference, commitment, trust, credibility and learning as an important addition to the college classroom manager-performer metaphor. I believe that professors should be leaders in their classrooms.

83. The Winning Edge

Nathania Louis-Pierre
Department of Paralegal Studies

Although the right to a jury trial has not changed since the formation of the United States Constitution, the way members of a jury panel is selected and seated has undergone many transformations. The latest of such transformation is the use of Jury Consultants by attorneys to pick a more favorable jury for their client's cause rather than to pick an impartial jury as the Constitution dictates. This shift in the purpose of jury selection and the use of jury consultants have raised the question as to if the use of jury consultants are a violation of an accused constitutional rights. The focus of my presentation will be to briefly highlight the primary constitutional issues posed by the use of jury consultants and to discuss how the Courts and members of the legal field are responding to this issue.

84. Gender Stereotyping by the Media in the 2008 Election

Samantha Adams
Department of Political Science

The 2008 election was unlike any other in American history. Hillary Clinton was the first viable female candidate for the Democratic presidential nomination, and Sarah Palin was the first female vice presidential nominee for the Republican Party. As a result, media coverage of the 2008 election was drastically different from other elections. For the first time, the media had a serious need to focus on female contenders for the two highest offices in the United States government. My research provides an in-depth look at two specific weeks of election coverage, focusing on the gender bias present in print media during this election cycle. The study utilizes qualitative methodology, specifically content analysis, to compare the media coverage of Barack Obama, Hillary Clinton, Joseph Biden, and Sarah Palin. The major finding of my research revealed that only female candidates received gender-specific coverage.

85. The Effect of Partisanship on Women's Electoral Fortune in U.S. House Races

Stephanie Jarrait and Jocelyn Evans
Department of Government

This study analyzes the relationship between partisanship and gender in congressional elections. For this analysis, the 2006 and 2010 election results will be used to evaluate the effect of gender and partisanship cues on mass voting behavior. This analysis will examine whether there is a correlation between women's electoral success and party identification. Preliminary findings suggest that partisanship does play an integral role in women's electoral viability. In electoral contexts favoring Democrats, Democratic women do better than expected. In electoral contexts favoring Republicans, Republican women do better than expected. This raises important implications for the role of gender in politics generally and congressional candidate evaluations specifically.

86. How to Design, Promote, and Produce a Student-Run Applied Sport Psychology Conference

Tonya Nascimento, MA
Robert Rotunda, PhD
Katy Tran, MA
Department of Psychology

Learn about the process of designing, promoting, and producing a student-run applied sport psychology conference from those who have done it. We have tips for success and pitfalls to avoid. Learn how the cooperation between parties at two universities resulted in a successful event beneficial to both. Sport psychology graduate students in sport psychology at Florida State University led a one-day conference hosted by the Center for Applied Psychology out of the University of West Florida. The conference consisted of 6 45-minute presentations with an applied focus, designed to appeal to psychology, exercise science, and sport management majors. We also targeted student-athletes, and athletic department staff at the hosting university. Because the University of West Florida offers a minor in sports and exercise psychology, but does not have a graduate program in sport psychology, this university was ideal for educational outreach in this area. The aim was to increase awareness and understanding of sport and performance psychology, to increase interest in seeking out and utilizing sport psychology services, and to encourage students to pursue sport psychology higher education.

87. Self-Efficacy and Anxiety in Relation to Students' Future Plans

Angelica Sullivan, Dr. Joan Duer
Department of Psychology

This study is to determine whether freshmen versus seniors differ on their levels of self-efficacy and anxiety dependent on their post-degree plans (attending graduate school or joining the workforce). The literature supports the hypothesis that seniors will have lower self-efficacy and higher anxiety than freshmen due to their imminent exit from the sheltered academic environment. Similarly, those who plan to enter graduate school will have lower anxiety and greater self-efficacy than those entering the workforce in that graduate school is an extension of one's academic career, while joining the workforce is an impending event. To test this hypothesis, a questionnaire is created on SurveyMonkey using a modified form of the Career Decision-Making Self-Efficacy Scale, Short Form (Betz, & Taylor, 1995) and the Adult Manifest Anxiety Scale, Work Pressures version (Lowe, Reynolds & Richmond, 2003). It will be sent in an E-mail through the School of Psychological and Behavioral Sciences to all freshman and senior psychology students.

88. Change Blindness: Can We Determine Its Predictors?

Jamie Partyka, Leslie Snedeker, Jenny Hasseltine, Carly Robbins
Department of Psychology

Visual changes constantly occur in the environment (e.g., changes in traffic, people shifting positions). Change detection is the ability to notice changes in the world around us (Rensink, 2002); it can denote proper detection (i.e., reporting the existence of a change), identification (i.e., reporting the nature of the change), and localization (i.e., reporting where the change occurred). When a change to a scene coincides with another event that disrupts the motion signal, which draws attention to a change, observers often do not detect large changes (Beck, Angelone, & Levin, 2004). This phenomenon, called change blindness, is the difficulty observers have in detecting changes to a visual scene (Simons & Rensink, 2005). This study examined the role of individual differences in attention (e.g., ADHD, boredom proneness, cognitive failures) to predict the ability to detect changes. Undergraduate students completed a change blindness task and were divided in a distraction (completed a simultaneous auditory task) or a no-distraction group (completed only change blindness task). Measures of attention did not accurately predict performance on the change blindness task, however, increased workload created with the auditory task decreased performance. This suggests that although using two separate modalities, multitasking does negatively impact performance.

89.)Implicit Sequence Learning Within a Unidimensional Framework

Summer Hargraves, Mallory Wells, and Carline Radius
Department of Psychology

Humans are capable of learning patterns present in the environment both consciously and unconsciously. Learning patterns unconsciously is known as implicit learning. Implicit learning is advantageous in situations where automatic and correct action is required

or where longer conscious cognitive processes would be maladaptive, such as during an emergency. In this study, researchers asked participants to respond to a sequence of stimuli on a computer screen via four response buttons, using the dependent variable of response time in milliseconds to assess which visual features were most significant to the implicit learning mechanisms of the brain. By presenting the same sequence within the visual dimension using three different features – space, color, and shape – researchers were able to assess if these mechanisms were capable of learning a pattern using all three different features in the same dimension, if a combination of features had a particular effect, or if one particular feature overrode the others.

90. The Effects of Perceptual Cues on Inhibitory Ability in Older Adults

Amy L. Underwood, Lisa A. VanWormer
Department of Psychology

The inhibitory deficit hypothesis states that compared to younger individuals, older adults exhibit less efficiency in the ability to filter task-irrelevant information from working memory processes. This study investigates the effect of pre-trial perceptual relevance cues on the inhibitory ability of older and younger adults. Results show that the effect of pre-trial cues differs based on both participant age as well as the semantic separation of relevant and irrelevant stimuli. This suggests that older adults are less able to filter out irrelevant information even with the aid of perceptual relevance cues.

91. The Roles of Visual Short-Term Memory and Working Memory in Change Detection

Sara K. Senkbeil, Amy L. Underwood, Brandon J. Webb, Jared B. Crittendon, Lisa A. VanWormer.
Department of Psychology

Under normal conditions, changes to a visual scene result in motion signals that capture attention and allow for quick change detection. However, when changes occur simultaneously with other happenings including eye movements, visual obstructions, or brief blank delays between viewings (ISIs), those motion signals are not observed. As a result, large changes to visual scenes often go unnoticed through a phenomenon called change blindness. The contributions of visual short-term memory and working memory to change detection have been evaluated by manipulating the duration of blank screens (ISIs) presented between views of visual scenes. Specifically, when motion signals are present (i.e. 0 ISIs), visual short-term memory and working memory have no significant effect on speed and accuracy in change detection. However, when motion signals are masked (i.e., 300, 800, or 2000 ISIs), interesting trends in change detection emerge based on individual differences. These results suggest that performance in change detection tasks may be predicted by individual differences in visual short-term and working memory rather than individual differences in attention.

92. Using Motivations as Predictors of Team Sport Participant Positive or Negative Outcomes

David Hill, Daryll McKinley, and Cynthia Moreno
Department of Psychology

By employing self-determination theory and three measures of outcomes, an investigation was conducted to determine if motivations predicted the outcomes of athletes involved in the team sport of women's roller derby. Data was collected from one-hundred-two athletes from the Northwest Florida area via a questionnaire containing the Sport Motivation Scale and three outcome measures; satisfaction, persistence, and concentration. Stepwise forward multiple regression analyses were performed to determine which predictor variables best measured the criterion variables, or the outcomes. Intrinsic motivation and amotivation were found to predict positive and negative outcomes, respectively, with high correlation. Extrinsic motivators did not prove to be significant as predictors of outcomes in this study. These results are pertinent in the world of sports with regard to coaching and mentoring athletes.

93. Spatial Averaging the FVEP-P2: A Reliability Study

Mary K. Hennessey, Elise M. Lullo, Jameson D. Beach, James E. Arruda, PhD.
Department of Psychology

The flash visual evoked potential P2 (FVEP-P2) is a prominent component of the flash visual evoked potential. The FVEP-P2 occurs approximately 124 milliseconds after the presentation of a strobe flash and its latency and amplitude have been attributed to the operation of the cholinergic areas of the circumstriate visual cortex—a system known to play a critical role in cortical arousal (Coburn et al., 1993). Unfortunately, the temporal resolution associated with the FVEP-P2, which requires numerous (e.g., 100) stimulus presentations, is much too low for it to be used to study neurocognitive processes such as sustained attention. The purpose of the present investigation was to assess the reliability of the FVEP-P2 when measured (combined) from several adjacent electrode-recording sites. The results of this investigation suggest that fewer than 100 stimulus presentations are necessary to obtain a reliable FVEP-P2 when the FVEP-P2 is averaged across several adjacent electrode-recording sites.

94. Cyclic Variations in Sustained Human Performance

Elise M. Lullo, Mary K. Hennessey, Jameson D. Beach, James E. Arruda, PhD
Department of Psychology

The study of sustained attention has implicitly supported a model of attention as a single resource pool that is depleted over the course of a task. A graphical depiction of the decline in performance, which is often measured as performance accuracy, supports this view (Smith, Valentino, & Arruda, 2002). However, research conducted by this and other laboratories (Smith, et al., 2002; Smith et al., 2003) suggests that sustained human performance may also be cyclic, with predictable lapses in focused attention occurring, on average, every 1.5 minutes (Arruda et al., 2009). We now believe the 1.5-minute cycle may be a signature of an arousal system that is capable of deflecting performance by expanding attention (Tucker & Williamson, 1984). The purpose of the proposed investigation will be to examine the role of arousal in the sustained attention process by using the flash visual evoked potential P2 (FVEP-P2). The FVEP-P2 is a measure of cholinergic functioning in the circumstriate visual cortex. It is predicted that cyclic changes in performance will be accompanied by cyclic changes in arousal as measured by the amplitude of the FVEP-P2 (Prasov, Chai, & Jeong, 2007).

95. The Association Between Sex Education, Age, and Contraception Use at First Intercourse

Stacey Bass and Tamara Powell
Department of Psychology

A correlational study examined the relationship between the presence of sexual education either at home, school, or both and the age at which teenagers had their first sexual intercourse. It also examined whether or not they used contraception. By means of an anonymous survey, 155 participants reported the type of sexual education, if any, that they received, their age at first sexual intercourse, as well as their contraception use habits. The study hypothesizes that the presence of sexual education effectively reduces adolescent sexual risk behaviors when provided before sexual initiation. The strongest correlation observed was between the presence of instruction at both locations and the delayed onset of sexual intercourse. These findings suggest that the most effective sexual education is received both at home and at school.

96. Peer Group Conformity of Academic Achievement in High School Band Programs

Ashley Rotolo
Department of Psychology

Cliques (small groups comprised of 3-4 people) have been the focus of recent research on peer group conformity as well as negative behaviors (smoking, violence, etc.). This study deviates from this focus, observing the conformity of academic achievement of a more expansive, formal, school-established peer group, high school band. Two high school band programs, a combined total of 250 participants, were measured on two factors, leadership responsibility and commitment to the program. These measures were used to determine the structure of the group; the greater the commitment and leadership displayed, the more central a member was believed to be within the program. An analysis of participants' GPA determined conformity variance in relation to group centrality. A social network analysis was also conducted to determine informal cliques within the band programs; academic achievement conformity of the cliques was ascertained and compared to the conformity of the band programs.

97. Correlation Study of Idiosyncratic Events and Puberty

Kimberly Rivera
Department of Psychology

The purpose of this study is to determine if a relationship exists between idiosyncratic (non-normative) events and puberty, specifically the onset of puberty and psychological stressors such parental divorce, death of immediate family member, changing schools and other similar items. We will also attempt to determine if there is a relationship between the perception of the idiosyncratic event effects and the actual physical onset of puberty. Data will be statistically analyzed to determine: 1) any relationship between idiosyncratic events and the onset of puberty, 2) if a there is a statically significant difference in any relationship between idiosyncratic events and gender, 3) if a relationship exists between the physiological onset of puberty and perception of the effects of idiosyncratic events.

98. Autonomous Virtual Rover: Using AI to Navigate and Survive in Unknown Terrain

Travis Dimmig, Joel Lorenz, Dr. Eman El-Sheikh
Department of Computer Science

The goal of this project is to assemble an autonomous virtual rover which navigates through and interacts with a simulated environment. A game's interface will provide the tools necessary for the

simulation. Despite using a game engine to conduct the simulation, we will implement AI methods in an event-driven manner which could also have value in real-world applications if they were implemented on a physical rover. The rover will use data that it receives through sensors in order to acquire targets and form a route to them using the A* search algorithm. It will acquire additional data about the unfamiliar environment while searching for its objective, to improve future navigational performance, and learn from its target's movement as well in order to better track it. Data will be made available to the rover almost exclusively through sweeping sonar, collision detection, a compass, and a global positioning sensor. The rover's choice of action will be balanced between three goals with distinct priorities: projectile-avoidance/self-preservation, obstacle-avoidance/navigation, and target-acquisition/aggression. The result of the project will be the development of an autonomous rover capable of navigating an unknown terrain while simultaneously defending itself from enemies and making intelligent counter-attacks.

99. An AI Framework for Maze Navigation in Robotic Environments

Zachary Ramirez, Dr. Eman El-Sheikh
Department of Computer Science

As more systems become fully automated, there is an increasing need to be able to quickly traverse an environment. This project focuses on the development of an AI framework to allow a robot to learn its environment and efficiently traverse it, regardless of where it starts. Several AI pathfinding techniques, including A*and machine learning methods will be explored and evaluated within this framework. The goal of the system is to allow a robot to identify its current location, and efficiently navigate to a specified end point with minimal uninformed search or human interaction. The project will establish a code base for future research projects to build upon and evaluate more advanced AI-based navigation strategies.

100. Very Intelligent STock Analyzer (VISTA)

Anthony Ruble, Jack Davis, Dr. Eman El-Sheikh
Department of Computer Science

Stock investors are everywhere, from large corporate firms to the blue collar worker. Every investor seeks tools or some method to accurately analyze or even predict a stock's future behavior. In the past, linear regression models were used to predict stock behavior, but stocks do not behave according to a linear formula. The use of AI to learn the relationship between certain factors and the value of a stock can bring us closer to solving the mystery of stock prediction. This project uses Neural Networks to demonstrate how AI can be used to explore the relationship between financial variables and future stock trends. Our Neural Network (Very Intelligent Stock Analyzer VISTA) will tell us if a stock will increase, decrease, or remain stagnate in value. The results of this project will open doors for further evaluations of stock variables and the use of AI in stock prediction and analysis.

101. Implementing Swarm Intelligence for Solving Complex Problems

Thomas Broxton, Dr. Eman El-Sheikh
Department of Computer Science

Swarm intelligence is used throughout the world to calculate the best routes for a delivery company or manage the aircraft schedule at airports. Simply put, swarm intelligence is when many "dumb" bots, or ants or fish, work together to solve a complex problem. Using two different algorithms, leaking bucket and a committee-style method, in separate instances, we will try to replicate a swarm intelligence that must solve a problem. We will set up a game in which virtual bots must defeat a much stronger enemy. The virtual bots we developed must work together to locate more allies, evade the enemy when outmatched, and attack when the swarm feels like it can defeat the enemy. The result of this project will be a framework for the exploration of swarm intelligence using AI methods.

102. Virtual Orchestra

Cody McDavid
Department of Computer Science

Computer generated music is a very interesting concept. The Virtual orchestra is a project that allows people who have no formal musical skills to play with the virtual instruments and experiment conducting an orchestra. The Virtual Orchestra program allows a user to select any number of available instruments to be in the orchestra. Each instrument that is selected is assigned a number of randomly selected notes within a preset key. The user can then select how many notes should be played. The program will then play randomly selected notes from the selected instruments and their assigned notes. This program utilizes several classes, instrument, orchinstrument, createorchestragui, and orchestraGUI. An example of the GUI interface is attached. The GUI will display the notes that are assigned when an instrument is selected, as well as display the names of the notes as they are played.

103. Traffic Simulation: A training tool for persons with Autism

Billy Abston, Dr. L. Prayaga, Dr. J Huband
Department of Computer Science

In 2009 there were a total of 4,092 pedestrians killed in the U.S. In Florida there were 466 (NHTSA). It is my desire to create a simulation that will help persons to practice safe street-crossing habits in a controlled virtual environment before practicing in the real world. This type of simulation has been done before most notably at the University of Haifa by (Josman et al.). I intend to enhance this by using immersive technology of 3-D and motion sensing provided by the Xbox Kinect. It is my hope that I will be able to create a working simulation and deploy it into the community and help children develop necessary life skills.

104. Argos Glest: Ambitious AI Automating Annihilation(Intelligent Game Play Using AI)

Titus Brewster, Patrick Brown, Jason Graves
Kraig McConaghy, Dr. Eman El-Sheikh
Department of Computer Science

The goal of this project is is to create an Intelligent Player for the RTS (Real Time Strategy) game Glest that utilizes Artificial Intelligence techniques to create a competitive AI agent that will challenge human players. Glest is an open source game where anyone is free to use the existing code and modify it; freedom makes it a prime choice for a research group. Our agent will take information from the environment and use this to select its strategy. We will be playing our agent against the game's current agent to have a consistent baseline to test against. We will monitor the AI's performance during each game and attempt to rectify any major errors within the techniques it is using. Over time, we will be creating more complex and effective tactics for our agent to use against its opponents and have it play human opponents to provide a truly challenging game experience. This project will provide a framework for the exploration of AI methods for more intelligent and adaptive gameplay. The framework will establish a code base for future teams to build upon to develop and evaluate more advanced AI based game tactics and strategies.

105. Optimizing Best-Case Performance in WoW Using AI

Andre King, Dr. Eman El-Sheikh
Department of Computer Science

The goal of the project is to create an AI system which uses a Genetic Algorithm to generate abilities which can be used to produce (ideally) optimal play in Blizzard Entertainment's World of Warcraft game environment. The abilities will be generated under the time constraint that the next ability must be found before the player would be able to act again. The results of the system will be compared to brute-forced optimal ability use as well as average player's ability use to evaluate the system's performance. In addition, data from players attempting to follow the AI system's commands may be gathered as a further means of evaluation. For legal and other reasons the system will not be capable of actually interacting with the game world, so its damage will be calculated using known formulas for the game world. If successful the system could be combined with other systems which could provide it with an environment to actually execute its output in the game world, producing an agent which plays World of Warcraft as a human would – hopefully even better.

106. Let's Make Music: Generating Music Using Artificial Intelligence

John Connor, Dr. Eman El-Sheikh
Department of Computer Science

The goal of this project is to discover algorithms for use in the generation of "beautiful and moving music." There have already been many successes in this field (Cope 1996; Lichtenwalter, Zorina, Chawla, 2008) but there is much room for improvement and original research. Our methods include Markov chains, Bayesian Networks, and cluster analysis. These methods are applied to a large corpus of training materials, including the symphonies of Beethoven, Mozart, and Bach, and generate new songs in the styles of the legendary composers. The results of this project are an interactive environment for the generation of music, as well as many tools to aid in the process of visualizing and understanding the algorithms used.

107. Much Ado About Dramaturgy

Sheila Mettetal
Department of Theater

As a dramaturg for Pensacola Shakespeare Theater's productions of Much Ado about Nothing, my task was to focus primarily on the time period in which the play was set, 1945. I did my best to provide the knowledge of the time that people living then would have accumulated historically, as well as culturally, economically, and observationally. The packets given to the cast and crew contained initial key facts to establish the culture the characters would have walked through. World leaders that would have dominated headlines were given a background, important battles that would have taken the lives of loved ones were addressed, and life-changing events starting from World War I adding up to the second World War were narrated. The characters were also provided with resources to understand their individual walks of life. In addition to explanations and stories, the cast was shown videos of important speeches and events. Music of the time period was compiled into various playlists to which the cast could listen and enjoy. Pictures and illustrations

of leaders, events, everyday people, Navy men, and other helpful subjects finished the packet in order to make a visual connection with all that was presented in previous pages.

108.Double Vision: A Novel
Theresa C. Kemp
Department of English
This presentation showcases the character and plot elements of the manuscript Double Vision. Using writing techniques to develop characters and plot, this novel will showcase my talents as a writer. In order to illustrate the use of my techniques, character sketches for the main characters and a plot synopsis will be provided. The novel falls into the thriller genre. The novel centers around two brothers, Ian and Ryan Vestige. Ian tinkers around with computer technology and has made a name for himself as a video game designer. In discovering a broken pair of glasses at a murder scene, Ian inadvertently becomes the owner of secret spy technology that holds information concerning future attacks on the western world by an Asian terrorist group. Soon, figuring out how the glasses work is the least of Ian's problems, because he has to save his brother, get the girl, and maybe stop some terrorists in the process. Though Double Vision is a work of fiction, the novel follows a prescribed literary formula and will not disappoint.

Presentations & Performances

Camp Fire USA Public Relations Plan
Tiffany Elise McWilliams
Department of Communication Arts
This honors thesis will compose an effective eight step public relations plan, along with a brief history of the Camp Fire USA branch in Milton, Florida. It will include a press release, a journal article, a flyer, and a poster. The plan and paper will be executed by researching and examining current public relations experts, in the field, and information pertaining to the Camp Fire USA organization. I intend to produce a plan that can be used to educate and inform public citizens in the Milton, Florida area of Camp Fire USA's services and activities.

Rhetorical Criticism of the Exclusion of a Lane Bryant Commercial Ad
Kristen Rowland
Department of Communication Arts
This submission is a speech that aims at explaining a situation that happened in the world through the lens of a communication theory, in essence a rhetorical criticism. The speech uses the communication theory written by Rosalind Gill entitled Sexism/ Empowerment: Figuring Female Sexual Agency in Modern Advertising published in the 2008 Feminism and Psychology to explain the censorship of a lingerie commercial ad produced by Lane Bryant, a clothier that caters to full figured women, by the FOX and ABC news stations. The speech draws critical implications about the portrayal of women in advertisements and asks the question of why the Lane Bryant Ad was censored when Victoria's Secret Ads are celebrated by the media. Using Gill's lens as a comparative analytic framework the presentation provides great insight into our societies discomfort with average size women being displayed in the media.

Gubernatorial Power in the Face of War: Applying Beyle's Scale of Gubernatorial Power to Study Possible Effects of the CIvil War and Reconstruction on Executive Power in the South.
Rebekah Johansen
Department or Government
This study applies Thad Beyle's scale of gubernatorial power (Beyle 1968, 541, and Grey, Jacob, and Vines, eds., 1983, 180-221), which measures gubernatorial power in terms of institutional and personal powers, to the issue of Southern gubernatorial power. Understanding levels of gubernatorial power is essential for understanding the functions of State governments and American federalism in general. And understudied aspect of gubernatorial power is the topic of regional differences in light of the Civil War and Reconstruction. Are there real power differences between Souther and Northern states, or are various power levels dependent on perception alone? Can power disparities be seen as a matter of coincidence, or can inequalities be traced back to Reconstruction. Such questions are examined from a qualitative, case-by-case perspective and from a quantitative, global perspective. The goal of this study is not to make any global conclusions regarding the relative wisdom of the Civil War, Reconstruction, and those events' various aspects. Rather, this study aaims to apply Beyle's scale as it has not been applied before, in order to discover the impacts of the United States' most significant domestic event on what is perhaps its most significant domestic office.

"Louder Than Words"
Leah Arington, James Mitchell, Kate Bollone, Toni Bonaccorso, Ruben Diaz, Erin Finnegan, Rashawnda Foster, Chris Frazier, Lauren Johns, Savannah Simerly
Department of Musical Theatre
We are submitting an ensemble piece from the musical Tick, Tick… Boom! The music and lyrics are by Jonathon Larson. This was taken from our Second Annual Musical Theatre B.F.A. Recital. It was directed by Leah Arington, musically directed and accompanied by James Mitchell, and performed by Kate Bollone, Toni Bonaccorso, Ruben Diaz, Erin Finnegan, Rashawnda Foster, Chris Frazier, Lauren Johns, and Savannah Simerly. The recital was based on the philosophy that actions speak "louder than words". Each student was encouraged to approach this standard acting technique from outside of the box. Based on their own personal inner drive, each student chose an action verb which identifies an objective that is important to each of them based on the "given circumstances" of their own lives. This piece was the conclusion.

Maternal Attachment Style and Family Interactions
Stacey Bass
Department of Psychology
A correlational study examined the relationship between a mother's attachment style and any degree of child neglect that adult children felt while they were growing up. The degree to which the mother felt neglected was also studied. By means of an anonymous survey, 34 students and their mothers answered questions on the Experiences in Close Relationships questionnaire and questions on the Neglect Scale. The mothers were also asked questions from the Mother-Child Neglect Scale. The study hypothesizes that mothers who do not have a secure attachment are at a higher risk for neglecting their children. It was also hypothesized that mothers who neglect their children were more likely to be neglected themselves as children.

A Lesson In Love
Brandy Hooper and Jessica Benitez
Department of Theatre
Musical Theatre majors Jessica and Brandy will perform musical theatre pieces that all deal with the idea of love. The first piece is "I Still Believe" from the show Miss Saigon. This song deals with two women longing for the same man. Next, Jessica will sing "What Did I Have That I Don't Have" from the show On A Clear Day You Can See Forever. This song is about questioning what made her lover change his mind about her. The final piece is "What You Don't Know About Women" from the show City of Angels. This song is about two women taking a stand against unfaithful lovers. We wish to portray a message that all relationships should be equal and honest.

Selected scene(s) from Moliere's comedy Tartuffe
Nicole Dickson and Keegan Stull
Department of Theatre
Written in 1664 by French playwright and satirist Molière, Tartuffe or Tartuffe ou L'Imposteur, (Tartuffe the imposter or the hypocrite) is recognized as among the greatest examples of French Farce. This semester for Acting 3 students studied the genre of French Farce concentrating on the play Tartuffe. Since study has been given in this genre, it follows that scene work should be performed from this play as an example of the Theatre Department's work this spring for the student symposium. The scene selected for performance is Act 3, Scene 3, between Tartuffe (title character) and Elmire, (the lady of the house); the scene is Tartuffe's attempted (failed) seduction of Elmire.

Notes

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