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Spring 2015

Honors Research Symposium Program Spring 2015

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2015 HONORS RESEARCH SYMPOSIUM



UNIVERSITY
HONORS PROGRAM
GEORGIA
SOUTHERN
UNIVERSITY

2015 HONORS RESEARCH SYMPOSIUM

Nessmith-Lane Conference Center

Program Schedule

THESIS/ CAPSTONE PRESENTATIONS

Nessimth-Lane Classrooms

Session I

11:00 am to 12:00 pm

RECEPTION AND POSTER PRESENTATIONS

Nessmith-Lane Ballroom

12:15 pm to 1:15 pm

WELCOME

12:30 pm

Dr. Steven Engel

Director, University Honors Program

Dr. Jean Bartels

Provost and Vice-President for Academic Affairs

THESIS/ CAPSTONE PRESENTATIONS

Nessimth-Lane Classrooms

Session II

1:30 pm to 2:30 pm

Session II

2:45 pm to 3:45 pm

Session IV

4:00 pm to 5:00 pm

SYMPOSIUM BANQUET (Invitation Only)

Nessmith-Lane Ballroom

5:30 pm to 7:00 pm

WELCOME

Welcome to the Eighth Annual Honors Research Symposium. This event is designed to showcase the research and creative activities of the honors students of Georgia Southern University. This year, over 125 honors students will present their work, bringing the total number of participants to over 500 since 2008. The symposium program falls into two main components:

POSTER PRESENTATION...

...is designed for freshmen, sophomores, and juniors. They are presenting works based on research carried out in the context of honors classes, research based on experiential learning projects, or the preliminary studies for their Honors Theses. In all cases, poster presenters are eager to engage attendees and receive comments on their work. This is particularly true for the juniors who are, in most cases, just launching their thesis research projects.

THESIS PRESENTATION...

...feature graduating seniors who are delivering oral presentations of the results of their Honors Thesis work. Every honors student, in order to graduate as an honors scholar, must complete an Honors Thesis or Capstone Project. As the titles and abstracts in this program indicate, these projects span the realms of inquiry and creativity available at Georgia Southern. Also listed in the program are the faculty mentors who have worked with each of these students, providing advice, support, and mentorship as the students have completed these projects.

ENJOY THE SYMPOSIUM

Please silence cell phones and do not text during sessions in order to give full attention to all presenters. Please refrain from leaving sessions early or arriving late if at all possible. If you do plan to leave early to see a different session, please wait until the speaker has finished his or her presentation. Presenters using electronic presentations should load their presentations on the computer prior to the beginning of the session. Moderators will be in each session to make sure presentations run the appropriate length and to moderate Q&A sessions.

THE UNIVERSITY HONORS PROGRAM

The University Honors Program provides a small college atmosphere in the context of a large comprehensive university. The program is designed to foster the development of a critical sense of inquiry, a spirit of creativity, a global perspective, and an ethic of civic responsibility. A hallmark of the program is the emphasis on bringing ideas to life through undergraduate research, experiential learning, and service-learning opportunities.

ROOM 1909
11:00 AM to 12:00 PM

CESAR PEREZ Multimedia Communication
A Content Analysis of the MPAA Rating System and its Evolution
Dr. Melanie Stone

This purpose of this research is to determine whether or not there has been an increase, decrease, or no change at all in the amount of explicit content within PG-13 and R-rated films over the last four decades.

ZO HAYNES Theater and Mathematics
Implementation of Lighting and Projection into Metamorphoses by Mary Zimmerman
Kelly Berry and Dr. Sarah McCarroll

Metamorphoses was produced by the Georgia Southern Black Box theatre in spring of 2015. This is an examination of the process from research to the finished product of everything that went in to creating the lighting and projection for this production.

SESSION I
THESIS
PRESENTATIONS
11:00 AM to
12:00 PM

ROOM 2901

11:00 AM to 12:00 PM

RACHEL MELCHER Anthropology
Opinions on Divorce in Georgia between Different Demographic Groups
Dr. Heidi Altman

Divorce is a divisive topic; indeed, divorce rates differ wildly among different demographic groups. What about opinions, though? What are the differences in opinions on divorce in Georgia between separate different demographic groups? My research suggests that the different lines of thought are drawn largely on religious and ethnic lines.

AMANDA SHIVELY Anthropology
Osteology of a Burial Vessel from the Late Prehistoric /Early Contact Period Pine Harbor Site (9MC64)
Dr. Heidi Altman

This research focuses on osteological examination of a single urn-burial's contents from Pine Harbor (9MC64), a late prehistoric to early contact period archaeological site excavated on the coast of Georgia in 1978. Analysis generated from this study seeks to shed light on burial demographics and practices of its native occupants.

SARAH RYNIKER Anthropology
To the Savannah Irish: An Ethnohistory of the Culture from 1812-1880
Dr. Heidi Altman

Between the years of 1812-1880, the Savannah Irish created and maintained an identity based on Irish ideologies of separatism, independence, and egalitarianism. Through an analysis of Hibernian Society toasts and interviews, the social, economic, and political institutions which influenced the Savannah-Irish culture emerged.

ROOM 2903

11:00 AM to 12:00 PM

MARIANA HERNANDEZ Chemistry
Controllable and Variable Ibuprofen Release from Temperature Responsive Polymers
Dr. Ji Wu

Composite nanofibers containing poly(ϵ -caprolactone), temperature responsive poly(N-isopropylacrylamide), and ibuprofen have been fabricated using a co-axial electrospinning method. It was found that drug diffusion rates can be varied by 70%, upon changing the diffusion temperature from 22-40 °C, without a burst effect due to the protection of the hydrophobic poly(ϵ -caprolactone) layer.

ASHLEY JOHNS Chemistry and Biology
Synthesis of Asolectin-Containing Latexes by Emulsion Polymerization
Dr. Rafael Quirino

Bio-based vesicles, for use in drug delivery or nanocatalyst stabilization, have been prepared by the emulsion copolymerization of tung oil and asolectin, a natural phospholipid from soybeans, in a xylene/water emulsion. Raman spectroscopy, Maldi-TOF, and differential scanning calorimetry analysis have been used to verify completion of the reaction.

JOEL PAGE Chemistry and Spanish
Peptides Designed as Mimics of NF- κ B for Transcriptional Regulation
Dr. Amanda Stewart

Nuclear factor-kappa B (NF- κ B) is a transcription factor that is implicated in several physiological processes. NF- κ B is thought to play a role in epilepsy, and the aim of this project will be to synthesize artificial peptides that mimic NF- κ B to bind κ B DNA selectively and regulate transcription in epilepsy

ROOM 2904

11:00 AM to 12:00 PM

MEREDITH AMASON Marketing
The Effects of Religious Symbolism on Consumer Perceptions of a Salesperson
Dr. Trey Denton and Dr. Lindsay Larson

The purpose of this study was to analyze the effects of the inclusion of a religious symbol on perceptions of sales effectiveness and appropriateness of religious signaling. Findings indicate that for people with both high and low levels of religiosity, the presence of an obvious religious necklace lowered evaluations of salesperson effectiveness.

ADAM MURFIELD Logistics & Intermodal Transportation
Cargo Theft in the Motor Carrier Industry: An Exploratory Study
Dr. Christopher Boone

This qualitative study explores how firms within the transportation industry develop opinions on cargo theft as a disruption to their supply chain. Key findings identified insights along three common themes: what considerations firms give relative to cargo theft, what are they doing about it, and future challenges.

THOMAS HAMILTON Logistics & Intermodal Transportation
Logistics Performance Measurement: A Comparison of Literature and Practice
Dr. Christopher Boone

Effective measurement of logistics activities contributes directly to a firm's achievement of sustained competitive advantage and is garnering increased attention from scholars and industry leaders. This research effort compares logistics performance measurement academic literature with respective industry practices through the lens of the management fashion theory.

ROOM 2905

11:00 AM to 12:00 PM

MADISON ROZAKOS Writing and Linguistics
A Thing of Beauty is a Joy Forever: Its Loveliness Increases; It Will Never Pass into Nothingness
Emma Bolden

A Thing of Beauty is a series of short, nonfiction essays attempting to illustrate my perception of beauty. This piece exposes narratives through resonant paradoxes: using beauty to imply a multiplicity of meanings impossible to parse, but implying definite and retrievable meanings as an external mirror to the internal experience.

BETH MARTIN Writing and Linguistics
The Scars We Choose
Dr. Sarah Domet

"The Scars We Choose" is an excerpt of a full-length novel of the same name. Fictional sections retell the Hawai'ian epic of *Pele & Hi'iaka* within the context of World War II, while interspersed creative non-fiction written from my perspective underlines the theme of how history negotiates with memory.

JAMES DEVLIN Writing and Linguistics
Orbit
Jared Yates Sexton

A collection of connected short stories based around a dysfunctional family. Each story takes the point of view of a different character with a unique voice.

ROOM 2908

11:00 AM to 12:00 PM

KAYLA SMITH Biology
Zebrafish Neurovascular Development: A Model for Human Cerebrovascular Disease
Dr. Vinoth Sittaramane

We utilized zebrafish embryos as a model to study the role of the cell-adhesion protein integrin alpha 6 in the development of stroke.

KORI S. WILLIAMS Biology
The Role of Autism Susceptibility Gene Topoisomerase 3B (*TOP3B*) in Zebrafish Neural Development
Dr. Vinoth Sittaramane

Autism Spectrum Disorder (ASD) is known to cause varied behavioral effects in affected individuals. Biological causes underlying these defects are poorly understood. Investigation with *TOP3B* has demonstrated roles in early neural development, which have implications with ASD characteristics.

LAN NGUYEN Biology
Effect of Tetrakis (hydromethyl) phosphonium chloride (THPC) on Zebrafish (*Danio rerio*)
Dr. Vinoth Sittaramane

Traces of tetrakis (hydromethyl) phosphonium chloride (THPC), a flame-retardant chemical, were found in the Ogeechee River in Georgia, and was possibly a toxin contributing to 2011 mass killing of aquatic animals. Zebrafish (*Danio rerio*) model was used to investigate toxicity and developmental and stressor effects on zebrafish following exposure.

ROOM 2911

11:00 AM to 12:00 PM

CAITLIN BARKLEY Psychology
Learning Disabilities: Assessing Stereotypes, Metastereotypes, and Stigma-Consciousness
Dr. Amy Hackney

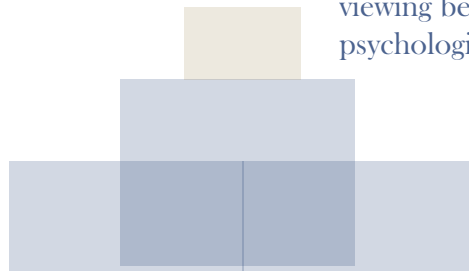
People with learning disabilities often believe that others hold negative stereotypes about their group, called metastereotypes. The purpose of the current research was to compare such metastereotypes and associated stigma with the actual stereotypes endorsed by others. Results showed that some stereotypes may not be as commonly held as feared.

HOLLY BURRELL Psychology
The Effects of Imagined Intergroup Contact on Attitudes toward Male Bisexuals
Dr. Amy Hackney

This study sought to determine whether imagined intergroup contact would reduce prejudice towards bisexual males. Participants were asked to imagine meeting and having a conversation with a bisexual man for the first time from a third person perspective with their eyes closed.


KATHERINE WHEELER Psychology
The Relationships Between Television Viewing Behaviors, Attachment, Loneliness, Depression, and Psychological Well-Being
Dr. Amy Hackney

There is a recent trend of “binge watching” television episodes via streaming products such as Netflix. Little is known, however, about the psychological correlates of such binge watching behaviors. The present study found several interesting relationships between college students’ television-viewing behaviors and relationship attachment, loneliness, depression, and psychological well-being.



BALLROOM

12:15 PM to 1:15 PM



POSTER PRESENTATIONS 12:15 PM to 1:15 PM

1. KAITLYN CARMICHAEL

An Examination of Happiness between Race, Gender, and School Classification - An Echo Boomer Analysis

Dr. Daniel Czech

The purpose of this study is to examine subjective well-being across race, gender, and school classification among college students. Students from 156 sections of physical activity courses at a mid-size university (n = 1200) will complete an online survey containing demographic questions and the Subjective Happiness Scale.

2. JESSICA LOVINS

The Experience of Physical Therapy Burnout (PTB) - A Qualitative Investigation

Dr. Daniel Czech

The physical therapy profession has become notorious for its rates of job stress, burnout, and job turnover in PT school and in the field after graduation (Donohoe et al. 1993; Campo, Weiser, & Koenig, 2009). This study will qualitatively examine experiential factors associated with burnout among various physical therapist populations.

3. SARAH THOMAS

Defining Occupational Therapy: Comparing the Definitions Given by Therapists and Students

Dr. Daniel R. Czech

Research suggests that the occupational therapy discipline is not well understood. This study will attempt to understand what discipline knowledge is held by occupational therapy students and how that compares to the understanding held by occupational therapists. The results could have implications for increasing the discipline knowledge of occupational therapy.

4. RILEY THEIS

Spectroscopic, Structural, and Energetic Analysis of Noble Gas Cations

Dr. Ryan Fortenberry

Due to the recent discovery of ArH^+ in the Crab Nebula, other noble gas hydride and hydroxide cations like ArH_2^+ , NeH_2^+ , ArH_3^+ , NeH_3^+ , ArOH^+ and NeOH^+ have sparked interest. The rovibrational spectroscopic data was computed for each molecule to assist in the potential detection of these cations in the ISM.

5. ELIZABETH ASHWOOD

Microgravity Gradiometry Measurement Schemes with Multiple-Pathway Atom Interferometers

Dr. Mark Edwards

We propose a scheme to measure the microgravity in NASA's Cold-Atom Laboratory on the International Space Station. In this scheme laser beams are used to split a Bose-Einstein condensate into multiple pieces that separate and recombine producing an interference pattern from which the microgravity can be inferred.

6. LYNDSEY SHELTON

X-Men, Dragon Age, and Religion: The Shifting Representations of Religion and the Religious in Comic Books, Video Games, and Related Media

Dr. Darin Van Tassell

The content, plot, and characters of media targeting young adults is a popular point of debate and discussion today. Usually these debates focus on topics like race, gender, and violence. This research looks at the portrayal of religion and the religious and how it has changed and is still changing.

7. DAVID MOORE, SAMUEL YUND, JOSH TIERRA, and NICHOLAS QUAN

Big Data Best Practices in the Fields of Engineering and Computer Science

Dr. Thomas Case

Big Data has quickly emerged as one of the top ways for companies to differentiate themselves from their competition. Some companies master Big Data techniques while others struggle. What are the Big Data best practices that make some companies so successful, and how can other companies benefit from these techniques?

8. JOSH WRIGHT, DANNY BURER, DALEY STEPANEK, and NOLAN JACKSON

Best Social Media Practices for Small Business

Dr. Thomas Case

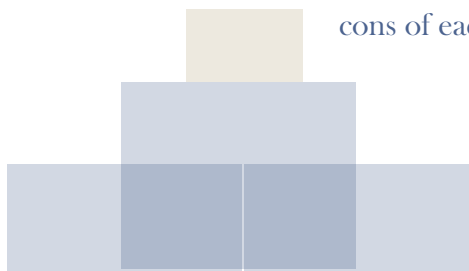
Small businesses can maximize their advantages gained through social media use by using key techniques and other technologies available. This primarily includes usage of social networks for interfacing with consumers, facilitating internal communications, and enhancing marketing strategies.

9. KYLE LEEP, REBECCA PRESTRIDGE, DANE KELLER, and CHRISTOPHER RALSTON

Social Media: Best Practices in Higher Education

Dr. Thomas Case

"Social Media: Best Practices in Higher Education" discusses how social media (i.e. Facebook, Twitter, E-mail, Skype, Folio, etc.) can be used to enhance the education and college experience of students. Many different uses for these social media "tools" are explored, and the pros and cons of each are elaborated upon.



10. CAROLINE LATHI, CASSIDY KEIM , MADISON KELLY, and SARINA KEFFER
Animal Assisted Therapy with Mental and Physical Health
Dr. Trent Maurer and Dr. Jerri Kropp

This presentation analyzes research completed in eleven different countries to gain a global perspective on animal-assisted therapy. Effects in both the mental and physical aspects were observed. We found that both mental and physical health can improve from animal-assisted therapy universally.

11. BERNADETTE O'DONNELL, BAILEY KIRK, and MARINA MICHAUD
La Bestia: Unaccompanied Migrant Children and the Train of Death
Dr. Leticia McGrath

Our poster presentation focuses on a global issue that was introduced to us in the documentary *Which Way Home*, which explores the harsh reality of many Central American children who travel alone atop a train called "La Bestia" in order to immigrate into the United States.

12. ERIC IRISH, ALEX NICHOLSON, and KELVIN ROSADO
Exploring the Changing Role of Women in Two Spanish Civil War Films: Belle Epoque and Las Trece Rosas
Dr. Leticia McGrath

Belle Epoque captures changing ideas regarding gender roles in Spain on the brink of its civil war; *Las Trece Rosas* depicts thirteen women struggling to be heard in Spain's post-war partisan clash. Our presentation focuses on women's changing roles in the Spanish Civil War as depicted in these films.

13. MELINA GUNBY, KAYLA ALLEN, and NICOLLETTE TODD
Irish Trans-Atlantic Influence in Savannah during the 1800s
Dr. Steven Engel

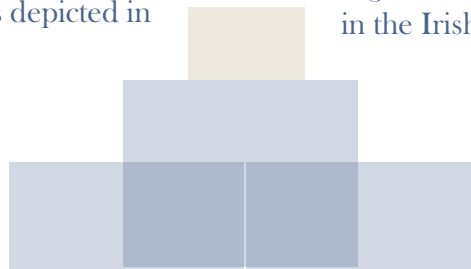
The main focus of our research is the Irish-American culture and experiences during the 1800s in the South through the representation of Irish in Northern and Southern newspaper and print, and the median of music. Although Irish music affected American music, traditional Irish music was still retained.

14. HANNAH CORDERY, JESSE MOSELY, and JANA E BONE
Irish Americans in the Civil War
Dr. Steven Engel

The most represented minority group in the Civil War were the Irish Americans. This report looks closer at the thousands of Irish volunteers who enlisted for both the Union and Confederate armies, with a special focus on the Irish Jasper Greens unit out of Savannah.

15. MEAGAN PARTRIDGE, EMILY DEYTON, and ALEXANDRA THOMPSON
Savannah Irish Identity
Dr. Steven Engel

Irish-Americans created a strong community during the 19th century through social, political, and religious organizations. The efforts of the Hibernian Society of Savannah, the Ladies Land League, and the Irish Catholic Church helped immigrants assimilate into American culture. These organizations impressed charity, open-mindedness, and interdependence in the Irish-American community.



16. LAUREN DISS, LIZZIE GEDDY, and VERNON HERRINGTON

Slavery: Shifting Views of the Irish in Savannah

Dr. Steven Engel

Before the Civil War, many of the Irish in Savannah opposed Daniel O'Connell's anti-slavery sentiments. Yet, after the war O'Connell's place as a hero among the Irish of Savannah was restored. Our poster uncovers the reasons for the Irish-Americans' change in opinion from pre- to post-Civil War.

17. AMANDA SEXTON, JONATHAN NIPPER, and HUNTER COPELAN

Religion and the Irish Diaspora: An Examination of Catholics and Protestants

Dr. Steven Engel

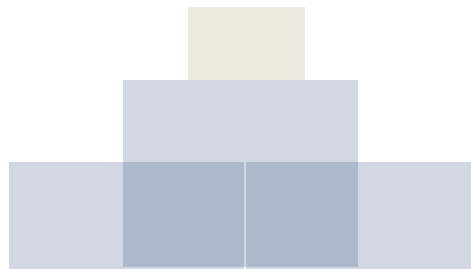
In the late 1800s, a flood of Irish immigrants, mostly Catholic, began searching for a new home in the predominantly Protestant United States. How did religion affect the Irish integration?

18. SAMANTHA PENTA, GARRETT CHAPMAN, and JACOB TURNER

The Economics of the Southern Irish American

Dr. Steven Engel

In the 19th century, Irish Americans in Savannah were largely relegated to the bottom of the southern economy, as members of the unskilled labor force and women as domestic servants. However, some found great success in the South which continued to grow throughout their family's generations.



ROOM 1909
1:30 PM to 2:30 PM

JAIME GRINCH

Justice Studies

Personal Perceptions of Privacy and Security
Dr. Adam Bossler

The US government is utilizing multiple controversial methods to detect and prevent terrorism. Do government officers such as police view these programs differently than university students? Surveys given to the groups provided their respective opinions on these programs, suggesting that police are more open to their use.

E. FEAGIN OLIVER

English

“That Flesh-locked Sea of Silence”: Language, Gender, and Sexuality in Beckett’s Short Fiction
Dr. Joe Pellegrino

This paper asserts the interconnectedness of language, gender, and sexuality in the short prose of Samuel Beckett. “Assumption,” “First Love,” and “Enough,” are used as specific examples of Beckett’s fiction, selected because they assist in understanding Beckett’s participation in, and inversion of, the hegemonic privileging of the masculine. This interpretation focuses on the use of gendered language, verbalization as a sexual expression, and the manipulation of the “male” and “female” voice. The analysis is both informed by, and seeks to nuance, the linguistic criticism established by second-wave French feminists Kristeva, Irigaray, and Cixous.

SESSION II
THESIS
PRESENTATIONS

1:30 PM
to 2:30 PM

ROOM 2901

1:30 PM to 2:30 PM

BRANDEN GREEN International Trade
What Happens When You Host World's Largest Party: The Political Impact of Hosting FIFA's World Cup
Dr. Darin Van Tassell

This research is a comparative study of the political impact the World Cup has on host countries. It examines the impact for a developed country compared to a developing country? The research supports that developing countries are affected more by the tournament than developed countries.

CAITLIN ROBERTSON International Studies
Wandering the World without Leaving Your Chair: Crossing Borders through eSports
Dr. Darin Van Tassell

There is a deafening roar as a point is scored. This may seem like a scene from any sports event, but it isn't. Welcome to the world of eSports. My research focuses on the eSport League of Legends. This research focuses on a new medium in an increasingly interconnected world.

COURTNEY TIELKING International Studies
and Spanish

Citizenship Without Borders: Understanding Empathy and Domestic Direct Service as Powerful Approaches to Making Global Connections that Matter
Dr. Darin Van Tassell

By unraveling a case study on Georgia Southern University's Alternative Break program, this research examines the relationship between empathy and globalization. The research suggests that through empathy and direct service, one can become a global citizen without ever leaving their hometown. Through empathy, the mind and heart can travel anywhere.

ROOM 2903

1:30 PM to 2:30 PM

CAMERON FERIANTE Chemistry
TEMPO-Containing ROMP Polymers and a Component for Treatment of Traumatic Brain Injuries
Dr. Hans-Joerg Schanz

Polynitroxylated Pegylated Hemoglobin (PNPH), a traumatic brain injury treatment, combines cell-free hemoglobin with TEMPO and polyethylene glycol. PNPH's require an intensive synthesis, and difficult analysis. This project focuses on the development of TEMPO functionalized ROMP monomers and polymers, later to be incorporated in a PEG and TEMPO containing co-polymer.

KRISTIN WALKER Chemistry
Magnetically Responsive, Antibody Targeted Gold Nanorods for the Removal of *Pseudomonas aeruginosa*
Dr. John Stone

Gold nanoparticle complexes continue to be utilized as novel therapeutic materials. We are dual functionalizing gold nanorods with iron oxide and an antibody specific to the bacteria *Pseudomonas aeruginosa*. This medicinal composite is being investigated for its ability to target and subsequently remove the bacterium *Pseudomonas aeruginosa* from a solution-based environment.

MADELINE SMITH Chemistry
Modified Lignin for Composite and Pellet Binder Applications
Dr. Rafael Quirino

Lignin is a naturally occurring polymer that is present in plants. We investigated various processes to chemically modify lignin in order to increase its processability. The free radical polymerization of modified lignin yields highly cross-linked materials, with properties compatible with applications as a pellet binder and as a thermosetting resin.

ROOM 2904

1:30 PM to 2:30 PM

EMILY HALL

Accounting

A Look at the Gender Wage Gap and its Reach into the Field of Accounting

Dr. LeVon Wilson

The gender wage gap recently has received greater attention. This study looks at several possible causes behind lower pay for women as well as solutions, both attempted and proposed. The field of accounting is focused on specifically and referenced throughout the study.

STEPHANIE GRATTO

Accounting

The Formation of a Student-Athlete Trust Fund: Compliance and Tax Implications

Dr. Britton McKay

This study reviews the possible tax and compliance issues of a student athlete trust fund as proposed in the case O'Bannon v. NCAA. With the possibility of the creation of a trust fund comes a myriad of issues to consider.

STEPHANIE SIMPSON

Accounting

An Exploration of Income Characteristics: Analyzing Targets and Acquirers in Banking Mergers and Acquisitions

Dr. Allissa Lee

This research analyzes the income characteristics of targets and acquirers to determine any indicators that distinguish an acquirer's income structure from a targets. To do this, income statement items from these banking entities are examined using factors such as size, serial or nonserial classification, and (for the targets only) public or private status.

ROOM 2905

1:30 PM to 2:30 PM

LAURA SMITH

Writing and Linguistics

Lockwood

Jared Yates Sexton

Lockwood is a collection of linked short stories in the genre of fiction. Set in a small, southern town of the same name, the stories focus on five people after a violent crime takes place and addresses themes of race, class, gender, and small town mentality.

PARRISH TURNER

Writing and Linguistics

Can it be a Sin to Know? An Adaptation of Mary Shelley's Classic Work: Frankenstein

Lisa Abbott and Dr. Margaret Sullivan

This play is a retelling of Mary Shelley's *Frankenstein*. It explores Frankenstein as a man struggling with his asexuality. His creation is an object for desire. The work explores theories about bodies, gender, religious sexuality, queer theory, and what can happen when given the chance to confront the maker.

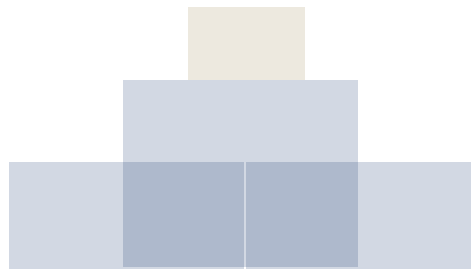
TAYLOR TYSON

Writing and Linguistics

The Jungle Down the Street, the Town Across the Bridge, All is Very Well

Emma Bolden

"The Jungle Down the Street, the Town Across the Bridge, All is Very Well" is a series of short, nonfiction essays. Focused around the town of Apalachicola, Florida, it addresses themes of family, folklore, and tragedy through the use of humor, anecdote, and historical research.



ROOM 2908

1:30 PM to 2:30 PM

DANIEL L. ALLEN, JR.

Biology
Carbon Dioxide Sensory Receptors in Two Disjunct Populations of the Pitcher Plant Mosquito, *Wyeomyia smithii*.
Dr. William S. Irby

The pitcher-plant mosquito, *Wyeomyia smithii*, utilizes carbon dioxide receptors to seek potential hosts for blood meals. Two disjunct populations of *W. smithii* were analyzed for differences in CO₂ sensitivity using a dual-choice olfactometer. Results indicate a difference between the two populations in accordance with known blood feeding behaviors.

JENNIFER TYSON

Biology
Relative Abundances of the Recently Introduced Barnacles, *Megabalanus coccopoma* and an Unidentified Species of *Megabalanus*, in the Southeastern U.S.
Dr. Scott Harrison

While studying the genetic diversity of invasive *Megabalanus coccopoma* barnacle, several individuals of an unidentified *Megabalanus* species were found. This study provided an estimate of the population size and distribution of both the unknown species and *M. coccopoma* through creating an accurate distinction of the two species using genetic analysis.

SHANNON KAHN

Biology
Divergence of Vertebrate and Insect Specific Toxin Genes between Three Species of Widow Spider
Dr. John Scott Harrison

All widow spiders produce venom composed of several different protein toxins. Previous research indicates positive selection pressures drive evolution of venom of snakes and snails. The study being presented found and analyzed nucleotide and amino acid divergence between three species of widow spiders, indicating the possibility of functional differences.

ROOM 2911

1:30 PM to 2:30 PM

HANNAH CHICOWLAS

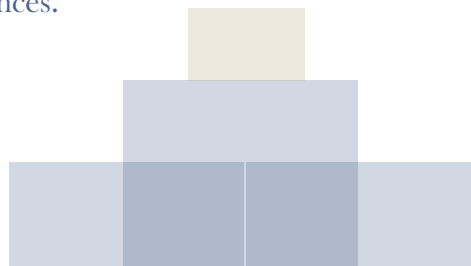
Nursing
The Effects of Latent Stage Diabetic Education and Tele-Health Reinforcement on the Knowledge of Low-Income Diabetic Patients
Margaret Mossholder

This comparative pilot study utilized tele-health as a form of educational reinforcement for 6 low-income participants from a local clinic. Two follow-up phone conversations were made to assess the participant's retention. This pilot study suggests, with improvement, this study could strongly support the use of tele-health on diabetes education reinforcement.

KARIN KVAM

Nursing
Barriers to Music Therapy in the Care of those with Alzheimer's/Dementia
Dr. Linda Upchurch

This pilot study examines the barriers caregivers encounter when implementing music therapy in the care of those with Alzheimer's/dementia. Results indicate that although the majority of caregivers report using music therapy, it is not implemented as frequently as it could or should be, primarily due to knowledge deficit.



ROOM 1909
2:45 PM to 3:45 PM

SHELBY HERRIN

Recreation

Application of Heritage Tourism Development Frameworks to Jenkins County, Georgia

Dr. Svitlana Iarmolenko and Dr. James D. Bigley

This study combines Gunn's Functioning Tourism System framework and Jamal and Getz's community collaboration method to develop effective tourism promotion plans for Millen, Jenkins County, Georgia. The results of the study provided the city with day-trip itineraries to Millen, a self-guided brochure of downtown Millen and plans for future development.

DYLAN MULLIGAN

History

The Original Progressive Farmer: The Agricultural Legacy of Thomas Spalding of Sapelo

Jonathan Bryant

This study examines the agricultural experiments of Thomas Spalding of Sapelo (1774-1851), who was arguably Georgia's foremost scientific agrarian. Spalding made significant contributions to the development of sugar cane, Sea Island cotton, crop rotation and diversification, and tabby, and yet his endeavors have gone largely unnoticed by most historians.

SESSION III
THESIS
PRESENTATIONS

2:45 PM
to 3:45 PM

ROOM 2901

2:45 PM to 3:45 PM

JENNA FLORENCE International Trade
**Buy American: An Introspective Look into National Corporate
Consciousness**

Dr. Darin Van Tassell

My research is focused in examining product perceptions and the importance of national identity on the marketability of foreign and domestic products. I am interested in determining whether globalization has weakened an individual's sense of national identity and whether that changes their preference for purchasing a foreign and/or domestic product

MARISSA McOMBER Political Science
and International Studies

**“If It Ain't Broke, Don't Fix It”?: Analyzing the Politics of the
UN Security Council and the Viability of the Group of Four's
Proposal for Reform**

Dr. Barry Balleck

The Security Council's mandate provides the authority to maintain international peace and security. Unfortunately, its permanent members do not represent the world's changing power. This study analyzes the history of the Council, efforts for reform, and the body's legitimacy by analyzing Brazil's bid for permanent representation through the G4 proposal.

NICOLE PUCKETT International Studies
**How to Get an American Boyfriend: Japanese Women and
Westernization**

Dr. Darin Van Tassell

This research focuses on Japanese women and how they use international experience and changes in appearance to look western or Anglo-European as a means of defining their individual identities. Women also work balancing those changes with their prescribed roles as mothers and homemakers.

ROOM 2903

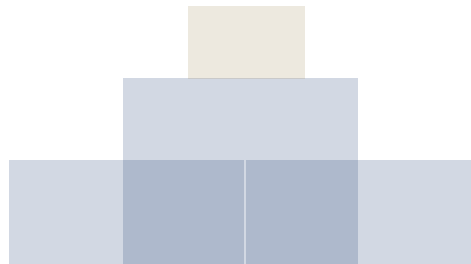
2:45 PM to 3:45 PM

ANDREW ROBERTSON Electrical Engineering
Chromatic Dispersion Monitoring in Fiber Optic Networks
Dr. Rami Haddad

Chromatic Dispersion monitoring is a very important topic in the field of fiber optics. We propose a technique to monitor Chromatic Dispersion by approximating the received bits as a Gaussian distribution and using the mean and variance of the distribution to predict the amount of chromatic dispersion present.

TYLER HEDGES Mechanical Engineering
**Green Recycling- Fabrication of Nano-Engineered Advanced
Aluminum Alloy with Aluminum Machining Chips Using
Friction Stir Extrusion Processing**
Dr. Shaowen Xu

Friction stir extrusion is a single-step solid state process for fabricating aluminum wiring without melting the aluminum, instead relying on a turning tool applying friction to aid in extrusion. This process of recycling aluminum chips was studied, and a small wire was able to be produced and studied.



ROOM 2904

2:45 PM to 3:45 PM

EMILY CHIZMAR Mathematics
Gallai-Ramsey and Vertex Proper Connection Numbers
Dr. Colton Magnant

Given a graph G , we consider two situations. First we consider a variation on the Gallai-Ramsey number using exactly k colors. Second we introduce the vertex proper connection number and provide a relationship to the chromatic number of minimally connected subgraphs.

ZO HAYNES Mathematics and Theatre
Drawing Numbers and Listening to Patterns
Dr. Hua Wang and Jim Braselton

This is a study of patterns found when applying a lattice to the Central Polygonal Numbers. We employed elementary number theory to justify these patterns and used the patterns to create images similar to those found in digital topology as well as to create music.

JULIAN HERSHEY Physics
Dynamics of Galactic Disks in Evolving Triaxial Dark Matter Halos
Dr. Clayton Heller

We examine the response of galactic disks to a changing triaxial potential. Under specific conditions, the embedded disk becomes unstable, tilts, and undergoes precession. This leads to shearing and a final spherical distribution of stars. However, with the inclusion of gas, the disk can remain planar and continue to precess.

ROOM 2905

2:45 PM to 3:45 PM

ALLISON HEISKELL Exercise Science
The Relationship Between Trait Anxiety and Optimism Levels in College-Aged Individuals
Dr. Daniel Czech

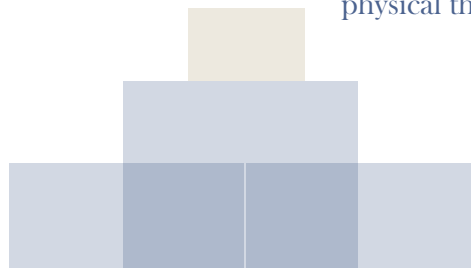
The purpose of this study was to examine the relationship between competitive trait-anxiety and optimism in college students. It was found that a statistically significant negative correlation existed between competitive trait anxiety and optimism, which confirmed the hypothesis.

KATELYN WEHNER Exercise Science
An Examination of Competitiveness between Gender, Race, and School Classification of Millennial Students - An Exploratory Study
Dr. Daniel Czech

The purpose of this exploratory study was to compare competitiveness levels between gender, race, and age of students within the Millennial Generation. The design was a quantitative, quasi-experimental, cross-sectional descriptive study utilizing demographic questionnaires and sport orientation questionnaires. Results revealed significance within all three categories.

NICHOLAS WOOD Exercise Science
A Qualitative Examination of Optimal Professional Traits of a Physical Therapist - An Exploratory Investigation
Dr. Daniel Czech

Physical therapists are constantly searching for aspects of their professional practice to improve, in order to enhance their interactions with patients. This study describes optimal qualities necessary for a successful physical therapy practice in rural and metropolitan areas.



ROOM 2908

2:45 PM to 3:45 PM

DANA SYLVESTRE

Biology

Determination of the *Dermacentor variabilis* Ferritin Gene Exon and Intron Structure
Dr. Quentin Q. Fang

Ferritin protein metabolizes iron in ticks. This project studied the organization of the *D. variabilis* ferritin H-chain gene. By comparing the gene's genomic region, obtained through PCR and cloning, with the cDNA, it was discovered that the *D. variabilis* ferritin H-chain gene coding region contains two introns and three exons.

GRANT BARNETT

Biology

Hepatic Gene Expression in Pups Exposed to 2-aminoanthracene in Utero Indicative of Susceptibility to Metabolic Syndrome
Dr. Eric Gato and Dr. Vinoth Sittaramane

2-aminoanthracene is an aromatic amine that has been shown to have harmful effects when ingested by lab animals. This project will find the effects of 2-aminoanthracene on the in utero pups after ingestion by the dams and will explore the histology and genes expressed in the liver as a result.

JACOB MAUCERI

Biology

Activating the MSH2/MSH6 Apoptotic Pathway in Cancer Cells Using Non-Reserpine Compounds
Andrew Diamanduros

DNA mismatch repair is a highly conserved process that is essential to the maintenance of genetic integrity and stability within the cell. Specialized mismatch repair proteins (MSH2/MSH6) are responsible for the identification and repair of DNA mismatch damage, but can be recruited to induce programmed cell death within cancer cells.

ROOM 2911

2:45 PM to 3:45 PM

AMBER BLAZER

Psychology

Coloring Expression Perception: An Attempt at Altering the Automatic Perception of Strangers
Dr. Shauna Joye

A two part study investigating the effect of colors black and white on the perception of strangers. Study one examined faces surrounded in black and white to see if faces in black were perceived as more aggressive. Study two examined how wearing these colors might further impact perception of strangers.

NATASHA LABALLE

Psychology

The Benefits of Religious Fundamentalism
Dr. Michael E. Nielsen

Using experimental methodology, we analyzed the benefits of religious fundamentalism. Our primary analyses suggest that there is a positive relationship between religious fundamentalism and spiritual well-being and a negative relationship between religious fundamentalism and religious doubts. Furthermore, our exploratory analyses suggest potential relationships between religious fundamentalism and other dependent variables.

STACIA FRITZ

Psychology

Using the Stroop Effect to Examine the Effect of Words to Which Humans are Sensitive on Cognitive Conflict
Dr. Janice Steirn

The purpose of experiment one was to test the effects of drink consumed and stimuli shown on cognitive conflict. There was a significant effect on stimulus. The purpose of experiment two was to test the effects of emotional stimuli on cognitive conflict. No significant results regarding a difference between stimuli were found.

ROOM 1909
4:00 PM to 5:00 PM

MIKE OFILI

Civil Engineering

State of the Accelerated Bridge Construction (ABC) in the
United States

Dr. Junsuk Kang

The purpose of this project is to develop a toolkit for the design and construction of bridges using prefabricated materials primarily to reduce the closure time and on-site construction time of newly constructed bridges or bridges undergoing renovation. The research focuses specifically on short span bridges in Georgia.

ZACH STRICKLAND

Civil Engineering

Learning from CINARA: Exploring the Depths of Participatory
Water Engagement in Cali, Colombia

Dr. Ashley Coles

CINARA is a Colombian academic institution with decades of experience regarding participatory approaches to water supply and environmental sanitation. This thesis explores the significance of CINARA's experience, as well as factors that have enabled and inhibited CINARA. Examining these factors can provide lessons for others interested in participatory work.

**SESSION IV
THESIS
PRESENTATIONS**

**4:00 PM
to 5:00 PM**

ROOM 2901

4:00 PM to 5:00 PM

KEENYA RIGGINS

Chemistry

Academic Motivation of students in Chemistry 1145 courses at Georgia Southern University
Jessica Orvis

The Chemistry 1145 courses are considered intricate, and by the end of said courses, many students typically change majors. Using a non-experimental design, which included a survey of 41, an attempt was made to find out what motivates students taking this course at Georgia Southern University to continue or discontinue taking other chemistry courses.

KRISTEN TILLMAN

Early Childhood Education

Parental Influences on College Students' Career Aspirations
Dr. Meca Williams-Johnson, Dr. Lina Soares, Dr. Yasar Bodur

The purpose of this study was to investigate the level of influence that parents of pre-service teachers had on their children's career decision making process. Using both surveys and interviews, data were collected from pre-service teachers to find patterns of parental influence among children of educators vs. children of non-educators.

STEPHANIE DORMINEY

Middle Grades
Education

Arts-Integration in a Middle Grades Social Studies Classroom
Dr. Meca Williams-Johnson, Dr. Lina Soares, Dr. Yasar Bodur

This study investigated if implementing arts-integration in a middle grades history classroom influenced student learning and satisfaction in Social Studies. Data included pre-test and post-test scores and an open-ended survey. Findings indicated even though arts-integration did not lead to higher student achievement, it impacted student engagement positively.

ROOM 2903

4:00 PM to 5:00 PM

KAITLYN HANLEY

Biology

Twenty Year Comparison of Reproduction of *Gopherus polyphemus* (Gopher Tortoise) and Habitat Characteristics between Two Sites of Differing Fire Management Plans
Dr. David Rostal

The gopher tortoise, *Gopherus polyphemus*, is a keystone species in the long leaf wiregrass system and populations can be found at Fort Stewart Army Reserve and George L. Smith State Park. This study analyzes reproduction of the two populations, use of habitat, and their dependency on management by fire.

KYMBREANA COLEY

Biology

Identification Guide to Larval Stages of Ticks of Medical Importance in the USA
Dr. Lance A. Durden

Scanning Electron Micrographs were prepared of four morphologically diagnostic regions (dorsal capitulum, ventral capitulum, scutum, leg coxae) for the larval stage of the 16 species of ixodid (hard) ticks known to parasitize humans in the USA. Based on the morphological characters observed, a dichotomous identification key was prepared.

MADISON BAJC

Biology

A Survey of the Prevalence of Intestinal Parasites in Semi-Feral Cat Populations in Bulloch County, Ga.
Dr. Michelle Cawthorn

As free-roaming opportunistic predators, feral cats' habits lead to parasitic infection and the establishment of a source of zoonotic pathogens. Through fecal analysis and statistical comparison, this study provides information on the frequency and prevalence of parasites. The significance of feline zoonoses and the public health implications are addressed.

ROOM 2904

4:00 PM to 5:00 PM

ANGELINA HEUGEL

Marketing

Status Consumption and the Millennial Consumer: An Exploratory Study

Dr. Jacqueline K. Eastman

This thesis discusses millennial consumers' perceptions about the motivation to purchase luxury and status items for the young working professional. It defines and addresses the relationship between status symbols and what drives the millennial generation's purchases and desires to purchase. Research was conducted through a detailed literature review, qualitative pre-test and focus group.

CAITLIN TONGCO

Finance

Long-Term U.S. Cross-Border Security Flows with Developed and Emerging Market Countries Surrounding the Global Financial Crisis

Dr. Axel Grossmann

This paper analyzes the impact of the global financial crisis on cross-border long-term security flows from and towards the U.S. The findings show that the global financial crisis impacted all cross-border capital flows in the analysis; yet, the timing and the significance of the impact varies among the different securities.

WILLIAM KITE

Economics

The Effects Hosting an Olympic Games has on the Host Nation's Economy

Dr. Gregory Brock

Many countries put a huge emphasis on hosting/bidding for an Olympics Games. We examine the benefits that these countries get from hosting an Olympic Games. Additionally, we investigate the influences that hosting an Olympic Games has on that country's gross domestic product per capita and their levels of international trade.

ROOM 2905

4:00 PM to 5:00 PM

AMANDA BASTIEN

Exercise Science

An Examination of Volunteer Motivations and Characteristics Between Required Volunteer Service and Non-Required Volunteer Service in College Students: An Exploratory Study

Dr. Daniel Czech

College students (n = 283) completed a questionnaire to investigate volunteering characteristics, volunteering motivations, and the relationship between required volunteerism in high school and volunteerism in college. Correlations between variables were assessed, and highest mean motivational functions, volunteer interests, and contributions were determined.

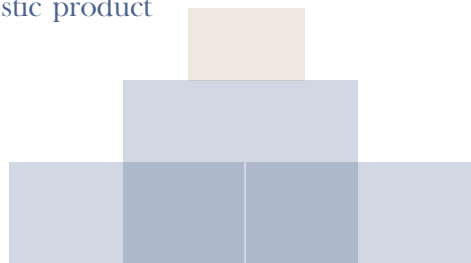
MOLLY WILLIAMS

Exercise Science

The Effects NCAA Division 1 Women Soccer Coaches Have on the Psychological Well-Being of their Players: A Qualitative Analysis

Dr. Daniel Czech

The current research examines the effects NCAA Division 1 women soccer coaches have on the psychological well being of their players. It shows how a coach's role in an athlete's life is not limited to the performance of the athlete, but expands to the psychological well being of the athlete.



ROOM 2908

4:00 PM to 5:00 PM

CHARLES J. ELMORE

Biology

Sugar Use Profiles to Inform Host Relationships and Spread of Spiroplasma Bacteria
Dr. Laura Regassa

Spiroplasma is a ubiquitous genus of helical bacteria. It has a wide host range and has been shown to be pathogenic in some cases. Understanding metabolic limitations may help to define host ranges in a geographically diverse sampling of spiroplasma.

RACHEL LUOMA

Biology

The Effects of Digestion on Innate Immunity
Dr. Zachary Stahlschmidt

The effects of digestion on the immune system have been widely understudied. I hypothesized that digesting animals would upregulate or downregulate innate immune function. I tested these using a hemoagglutination-hemolysis assay at two digestive states. I found that hemoagglutination was higher at 1dpf and females had higher hemolysis at 7dpf.

SARAH DUNN

Biology

Parasite Infection Mediates Trait Tradeoffs in *Fundulus heteroclitus*
Dr. Tavis Anderson

To be successful, an organism must eat, grow, and reproduce. With limited resources, there are tradeoffs between these life history parameters. Using a fish system, I measured reproductive investment, parasitism, and fish condition. In a stressed condition, fish invested in reproduction over immunity and maintenance of body condition.

ROOM 2911

4:00 PM to 5:00 PM

KATIE D. PHILLIPS

Interior Design

Evidence Based Design in Healthcare: An Applied Study on the Impacts of Interior Design for a Cerebral Palsy
Amy Boyett

Cerebral palsy, caused by damage to the brain, involves a variety of symptoms regarding loss or impairment of motor functions unique to the person and is best treated by therapy. This project focuses on a cerebral palsy rehabilitation center and uses evidence based design to apply current trends to the interior design of the space.

TRACY-ANN GRIFFITHS

Fashion Merchandising
and Apparel Design

The Death of Modesty: How the Decline in the Church's Influence along with Social and Cultural Factors in the Twentieth Century Directed Changing Views of Modesty in America

Dr. Mary Beth Myers

Modesty in America has changed dramatically since the early twentieth century. This paper serves to show that a combination of a decline in the influence of the church, as well as social and cultural factors of the twentieth century, helped shape the standards of what modesty in America is today.

SHANNON MICHELLE GRIFFIN

Interior Design

Sustainable Design in the Healthcare Environment
Amy Boyett

Sustainable Interior Design can be effectively used to promote the quality of life, wellness, and safety of all people in a healthcare facility from workers to patients, and it also promotes the wellness of the environment. A presentation of the social, environmental, and economical benefits of a sustainable healthcare facility.

ABOUT HONORS

The University Honors Program provides a small college atmosphere in the context of a large comprehensive university. The program is designed to foster the development of a critical sense of inquiry, a spirit of creativity, a global perspective and an ethic of civil responsibility. A hallmark of the program is the emphasis on bringing ideas to life through undergraduate research, experiential learning, and service learning opportunities.

The University Honors Program at Georgia Southern University rests on the foundation of the following ideals that are inspired by the institution's emphasis on engaged learning.

A CRITICAL SENSE OF INQUIRY

Honors students will explore a variety of approaches to research designed to foster the pursuit of knowledge. Students will develop the ability question with a healthy skepticism toward accepted opinion. The culmination of the undergraduate experience is an independent research or creative project designed to exemplify a critical approach to inquiry.

THE SPIRIT OF CREATIVITY

Honors students will embrace the idea that creativity is a virtue that should be experienced by all students, regardless of discipline. This spirit involves a respect for different ways of knowing and an openness to intellectual discussion and challenge.

CIVIC RESPONSIBILITY

Honors students will demonstrate an ethic of civic responsibility and exemplify the motto of the program, "Humility before Honor." Students will be challenged to use their abilities and talents for the advancement of humanity and the pursuit of a greater good. The primary vehicle for the expression of civic responsibility is through service both to the university and the community.

A GLOBAL PERSPECTIVE

Honors students will develop a perspective which allows them to approach their chosen discipline from an international point of view. This outlook involves the critical exploration of global concerns and proposed solutions to international problems. Honors education provides this worldwide perspective through academic courses, study abroad opportunities and co-curricular experiences.



HUMILITY
BEFORE
HONOR