



UNG'S 4TH ANNUAL

research pitch

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HOAG Student Center Auditorium, Rm 342, Dahlonega campus

November 1, 2023

5:30 pm to 7:00 pm

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UNG's 4th Research Pitch Presenters

Jaquelin Cruz Rosales - *Gender Role Changes in the Latino Community*

Yousef Jeddi - *Procedural Learning in Common Core Subjects*

Elijah T. Langston - *Simultaneous mass and electrochemical detection of stress hormone cortisol with aptamer biosensors*

Jorge Romero - *Pancho Villa: Why did his image change so much?*

Alyssa Pold and Jessica Howard - *To eat or not to eat? Vibrio bacteria in oysters from Georgia's coast*

Theo Holcombe, Devin Marshall, Tori Mullins, Destiny Johnson, and Angela Perez - *Analyzing Group Formation and Altruistic Tendencies using a Resource-Based Card Game*

Sophia Magana - *Polarization Affected Media, Not the Other Way Around: An Investigation into Modern Polarization and How It Transformed Citizens Media*

Lillian Hayes - *Elucidating the Effects of Artificial Lighting on African Mammal Behavior*

Laura Leigh Miller - *Oriental Sexpotism or Feminism*

Jessica Woods - *From Demands to Dialogue: Exploring the PRC's Policy Shift on the DPRK's Nuclear Program*

Ariana Harvey - *Can Mindful Self-Compassion Lessen the Impact of Social Media on Mental Health?*

Christian Dale - *Analyzing Avoidance of Healthcare among Emerging Adults*

Host and Emcee



Dr. Chuck Robertson

Dr. Robertson is a Professor of Psychological Science at the University of North Georgia. He enjoys working with students on undergraduate research projects, especially when they are in his favorite areas of memory or human computer interaction. He has also been known to venture out into other areas of psychology, such as the science of teaching and learning.

Judges



Dr. Erin Bush

Dr. Erin Bush is an assistant professor of U.S. and Digital History at the University of North Georgia. She is a digital and social historian specializing in the history of crime and punishment in the United States. She researches the social and cultural responses to crime, including how Americans have defined criminals and how we've chosen to punish them. Dr. Bush teaches classes on the history of crime and punishment, gender and sexuality, the long 20th century in the United States, and digital research methods.



Dr. Siew Chan

Dr. Siew H. Chan is an Associate Professor at Mike Cottrell College of Business, University of North Georgia, USA. Dr. Chan has embedded experimental tasks in computerized programs and online/paper research instruments to examine various behavioral research issues on accounting, business, and information systems. She has published 25 articles in several elite/top journals and published a book chapter too. Dr. Chan is the Editor-in-Chief of International Journal of Services and Standards. She was the Research Topic Editor of Frontiers in Psychology from May 2021 to October 2022. She is currently on the editorial board of International Journal of Accounting and Information Management.



Dr. Elissa Ferguson

Dr. Elissa Ferguson received her M.A. in Art History with a concentration in Egyptian Art and Archaeology from the University of Memphis and her Ph.D. in Art History from Penn State University. While her research concentration is ancient Egyptian art, she has minor fields of study in 19th century European painting and ancient Mesoamerican art. Dr. Ferguson's research has focused on using tomb art in conjunction with textual and archaeological evidence to reconstruct ancient Egyptian social structures, particularly those of elite families.



Dr. Sonny Mantry

Sonny Mantry is an Associate Professor in the department of physics and astronomy at the University of North Georgia (UNG). He obtained his Ph.D. at the Massachusetts Institute of Technology (MIT) in 2005. He completed postdocs at the California Institute of Technology (Caltech), the University of Wisconsin at Madison, and jointly at Northwestern University and Argonne National Lab, before joining UNG in 2014. His main area of research is in the field of theoretical particle physics.

Abstracts

Jaquelin Cruz Rosales - *Gender Role Changes in the Latino Community*

(Dr. Diogo Pinheiro, mentor)

After the migration to the United States, many Latino individuals have broken down the gender barriers placed among them by their own community. Women have taken the working jobs in the fields along with men demonstrating they can take care of themselves. Research is showing that the values placed on many of the Latino community have started to adopt these new principles and values on the gender roles performed by each individual. Latinos in the United States are working towards gender equality among their communities and breaking down the generational ideologies of marianismo and machismo among their own families.

Yousef Jeddi - *Procedural Learning in Common Core Subjects*

Of the three types of long-term memory (LTM; semantic, episodic, and procedural), it has been suggested that procedural (implicit) memory is the most primitive, the least susceptible to degradation, and the least affected by amnesia. Educational standards typically assess semantic knowledge; commensurably, instructional strategies tend to focus on semantic, lower-order thinking knowledge. This isn't true for all subjects. Music and art rely heavily on what I will refer to as Procedural Learning (PL), whereby instruction stimulates implicit mnemonics, i.e., playing an instrument, painting, etc. If educators in common core subjects were to utilize PL strategies, it may increase long-term retention in students.

My research proposal is for students in common core classes whose standards assess multitudes of semantic knowledge—i.e., history—to undergo a daily seminar that teaches a semester's worth of content within a single class period. This may stimulate long-term learning by encoding knowledge through implicit memory while also differentiating instruction for truant students as well as students with attention deficits since the same content would be taught every day.

Elijah T. Langston - *Simultaneous mass and electrochemical detection of stress hormone cortisol with aptamer biosensors*

(Dr. Royce Dansby-Sparks, mentor)

The detection of very small concentrations of molecules can be difficult to achieve with high levels of selectivity and sensitivity. Small single stranded artificial DNA sequences, known as aptamers, have recently shown promise as molecular recognition probes in biosensors. Current methods utilize either quartz crystal microbalance (QCM) to detect small mass changes or electrochemical oxidation of methyl blue for quantification. The objective of this research is to use an electrochemical QCM (eQCM) modified with DNA aptamer to selectively detect cortisol binding and subsequent removal from the biosensor through simultaneous mass change and electrochemical means.

Abstracts Cont.

Jorge Romero - *Pancho Villa: Why did his image change so much?*

(Dr. Michael Proulx, mentor)

In the beginning of the 20th century, Mexico underwent through a Revolutionary war that opened the stage for many characters to step up and leave their mark. These characters, known as caudillos, shaped the trajectory of the war, and ultimately, of Mexico's future. One of the most infamous caudillos was a self-proclaimed general of the north known as Pancho Villa. Today his image is quite questionable because of his actions at the time and by how others portrayed him, but Villa is a great example of how someone's image should be judged subjectively.

Alyssa Pold and Jessica Howard - *To eat or not to eat? Vibrio bacteria in oysters from Georgia's coast* (Dr. Dobrusia Bialonska, Dr. Paul Johnson, and Dr. Nancy Dalman, mentors)

Vibrio parahaemolyticus is the leading cause of seafood-borne illness in the United States; this bacterium causes gastroenteritis. Water temperature appears to correlate with bacterial concentrations in oysters. Observed bacteria concentrations in oysters from Sapelo Island are above FDA limits for safe consumption during much of the year. To better quantify oyster bacterial concentrations and their correlation with water temperature, this study will implement a highly accurate qPCR-based method to replace previous, less precise methods. From these results, the potential human dangers from *V. parahaemolyticus* can be further studied. Data may also be used to improve the mariculture industry in Georgia.

Theo Holcombe, Devin Marshall, Tori Mullins, Destiny Johnson, and Angela Perez - *Analyzing Group Formation and Altruistic Tendencies using a Resource-Based Card Game* (Dr. Kelly Cate, mentor)

This research focuses on how the use of a resource-based card game could both mimic these perceived outgroup threats; there are two independent variables with two levels, having a surplus or just enough resources as well as group size of 5 or 6 people. Observations will be recorded during sessions for further analysis. An online portion is used to collect demographics and have the participants complete the OCEAN personality assessment, this is used to run correlational statistics on which types of people will be more likely to commit to leadership roles, altruism, or follow other's decisions during the game.

Abstracts Cont.

Sophia Magana - *Polarization Affected Media, Not the Other Way Around: An Investigation into Modern Polarization and How It Transformed Citizens Media*
(Dr. Eric Wilks, mentor)

There is imprecise understanding the role media has as a cause for the modern political division (also known as Polarization) in United States politics. Understandably, media plays a tremendous role in political division that became the background in misleading headlines, algorithmic new sources, and political ads. Through this research, it was found that polarized media cannot be a catalyst for polarization. The Pew Research Center had concluded through analytical data that political polarization significantly began to occur in the 1970's and exploded in coverage in the early 2000's. As technology advanced, access to social media exposed people to channels of multi-media coverages shaped by the consumers interaction, economic support, and rapid political turnover starting as early as the 1970's.

Lillian Hayes - *Elucidating the Effects of Artificial Lighting on African Mammal Behavior* (Prof. Jessy Patterson, mentor)

Wildlife-based tourism is highly debated in the ecology field, as it provides economic and educational values. However, it can alter wildlife habitat and behavior. One area requiring focus is the effects of artificial lighting on African mammal behavior. Our research provides insight into human effects on mammalian species by examining behavior at artificially lit and unlit waterholes in Namibia. We observed mammalian behaviors using camera footage from two lit and two unlit waterholes and compared the number of behaviors between waterhole type, the number of behaviors with each other, and the number of behaviors between waterhole types using statistical analysis.

Laura Leigh Miller - *Oriental Sexpotism or Feminism* (Dr. Victoria Hightower, mentor)

Haifa Wehbe is a Lebanese-Egyptian singer and actress who is surrounded by an aura of controversy. Wehbe is perceived as an "oriental sexpot," "western feministic empowered woman," and a "heretic." These concepts are monolithic and view Wehbe as a one-dimensional entity. Nonetheless, Wehbe exists under all these labels and none. Existing under both Arab and Western eyes, Wehbe finds a way to sustain her independence by not conforming and being her true authentic self. Wehbe goes beyond the simple understanding that sex equals empowerment and single representations of identity prevalent in society, cannot explain the complexity of individuals like Wehbe.



Abstracts Cont.

Jessica Woods - *From Demands to Dialogue: Exploring the PRC's Policy Shift on the DPRK's Nuclear Program* (Dr. Haneol Lee, mentor)

From 2006-2017, China fully supported 10 UN Security Council (UNSC) sanctions following North Korean nuclear and missile tests. However, in 2022, China vetoed U.S.-proposed restrictions on North Korean petroleum following further missile tests. Minimal research exists investigating this policy shift. To investigate this phenomenon, I analyzed official statements and UNSC documents, and explored Chinese national security concerns and two key events that occurred during this period. Two possible explanations for this behavioral shift are the negative impact of the U.S.-China strategic competition on U.S.-China cooperation in the UNSC, and China's learned experiences using dialogue to bring North Korea to negotiate.

Ariana Harvey - *Can Mindful Self-Compassion Lessen the Impact of Social Media on Mental Health?* (Dr. Shelley Aikman, mentor)

Social media use is ever increasing, and debates continue as to whether that leads to more harm than good. During the pandemic in particular, social media was a means of connection, but it was also a means of doom scrolling and a source of misinformation, perhaps heightening stress and anxiety. For this reason, it is important to examine factors that might provide a protective function against the negative effects. In this study, we will examine the role of self-compassion and mindfulness in the relationship between social media use and mental health with the hope of using the research as a basis to develop interventions that lessen the effects of social media use on mental health.

Christian Dale - *Analyzing Avoidance of Healthcare among Emerging Adults* (Dr. Efren Velazquez, mentor)

Recent examinations of social media platforms have revealed a growing trend of content encouraging avoidance of healthcare services among emerging adults, aimed at audiences of millions. The present study aims to examine the underlying causes of healthcare avoidance in emerging adults to increase public outreach to an underserved community and combat misinformation. Existing quantitative scales examining distrust of healthcare will be used to gauge levels of avoidance, and demographic and social media use information will be obtained from participants. A multiple regression will be conducted to determine which factors predict avoidance in the population.





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Questions?

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