

Mississippi University for Women
ATHENA COMMONS

Mississippi Undergraduate Honors Conference

MUHC 2022 Back to the Future: Moving
Forward with Academic Inquiry

Feb 5th, 11:30 AM - 12:30 PM

Poster Session

Emma Beeler

Mississippi University for Women

Maddison Caldwell

Northeast Mississippi Community College

MacKenzie Paul

Mississippi State University

Shirli Salihaj

Mississippi University for Women

Sara Lynn Sligh

Mississippi University for Women

See next page for additional authors

Follow this and additional works at: <https://athenacommons.muw.edu/muhc>



Part of the [Applied Mathematics Commons](#), [Biology Commons](#), [Ecology and Evolutionary Biology Commons](#), [Food Studies Commons](#), [French and Francophone Literature Commons](#), [Mathematics Commons](#), [Medicine and Health Sciences Commons](#), and the [Psychology Commons](#)

Recommended Citation

Beeler, Emma; Caldwell, Maddison; Paul, MacKenzie; Salihaj, Shirli; Sligh, Sara Lynn; and Trest, Stephen, "Poster Session" (2022). *Mississippi Undergraduate Honors Conference*. 1.
<https://athenacommons.muw.edu/muhc/2022/track6postersession/1>

This Event is brought to you for free and open access by the Conferences and Events at ATHENA COMMONS. It has been accepted for inclusion in Mississippi Undergraduate Honors Conference by an authorized administrator of ATHENA COMMONS. For more information, please contact acpowers@muw.edu.

Presenter Information

Emma Beeler, Maddison Caldwell, MacKenzie Paul, Shirli Salihaj, Sara Lynn Sligh, and Stephen Trest

Humanities

Emma Beeler, Mississippi University for Women

Adultery and Fidelity in the Lais of Marie de France

Using both literary and historical analysis, I will examine contrasting depictions of adultery and fidelity within the *lais* written by 12th-century poet Marie de France. A *lai* is a type of narrative poem, ranging in length from 118 to 1184 lines. Many of Marie de France's *lais* follow the literary trope known as courtly love; however, the reader is encouraged to sympathize with different characters depending on the *lai*. In some *lais*, the reader is encouraged to sympathize with the adulterous spouse, and in others, with the faithful spouse. To understand these different depictions, I will consider Medieval marriage law, church doctrine, and social factors, as well as literary aspects of the *lais*.

Social Sciences

Maddison Caldwell, Northeast Mississippi Community College

Parenting Styles: Effects on Lifelong Growth

This project will examine parenting styles and how each can affect lifelong development. The parenting styles authoritative, authoritarian, permissive, and uninvolved will be explored. This project will require extensive analysis through different studies and scholarly articles. Parenting styles affect a child's behavior, social competence, personality, well-being, and career choices. A parent's choice of a parenting style affects their child their whole entire life. The authoritative parenting style was found to be the most beneficial style that can be used by a parent, while the authoritarian style was prone to cause conflict within the family. When the permissive parenting style is used, children were found to not set boundaries for themselves. Lastly, the uninvolved parenting styles causes relationship difficulties the child inhibits. I will also include a graph to show and explain how the different styles affect different aspects of life. This project clearly explains the four parenting styles and how they affect lifelong development throughout a child's life.

MacKenzie Paul, Mississippi State University

To Sweeten or Not to Sweeten: The Unique Impact of Emotional Support and Fatalism on Sugar Consumption Among Southeastern Native Americans

In 2020, 14.8% of Mississippi adults and 12.6% of Louisiana adults reported having diabetes, as compared to the national average of 10.8%. Furthermore, Native Americans of Mississippi and Louisiana experience disproportionately higher diabetes prevalence at 38% and 34% respectively. Research has shown that excessive sugar consumption is associated with an increased risk of developing type-2 diabetes. Psychosocial variables such as chronic disease fatalism and emotional support may also influence diabetes self-care behaviors including food consumption patterns like sugar intake. Therefore, the objective of this study is to examine the impact of emotional support and fatalism on sugar consumption among Southeastern Native Americans. The Mississippi INBRE Telenutrition Center Community Health Assessment Survey was utilized to survey 368 adults from Mississippi and Louisiana. Eighty-one of the participants, who self-identified as Native American, were included in the study. A hierarchal linear regression analysis showed that increased emotional support was significantly related with reduced sugar consumption ($\beta = -0.307$, $p = 0.004$), and increased fatalism was significantly associated with elevated sugar consumption ($\beta = 0.286$, $p = 0.007$). More research is necessary to substantiate this relationship among a broader Southeastern Native American population and identify potential implications for diabetes management in this disparate group.

STEM

Shirli Salihaj, Mississippi University for Women

Surface Reconstruction via the Curvature Interpolation Method

The surface reconstruction for scattered data becomes a problem as the number of sample points increases to construct a continuous function that satisfies given conditions in three dimensions (3D). However, it is known that this problem does not have a definite solution and therefore requires numerical approximations. This project studies the Curvature Interpolation Method with Iterative Refinement (IR-CIM), an innovative algorithm that produces smooth and reliable surfaces from 3D point cloud data. I use pre-collected data by Light Detection and Ranging (LiDAR) technology and MATLAB to perform digital image processing. I first study interpolation on 2D data and then practice with 3D data sets with simple interpolation methods to practice the implementation of IR-CIM for LiDAR data. The research objective is to compare the efficiency and accuracy of the IR-CIM with the inverse distance weighting method. Furthermore, I will verify that the IR-CIM outperforms the inverse distance weighting method and show that it is a good alternative to replace the outdated algorithm when processing LiDAR data.

Sara Lynn Sligh, Mississippi University for Women

Effects of Chloride Ion Channel Activators on CFTR Expression

The purpose of this research is to determine the effects of newly synthesized compounds, which have shown the ability to function as chloride ion channel activators, on the expression of Cystic Fibrosis Transmembrane-conductance Regulator (CFTR), a protein found within Cystic Fibrosis Bronchial Epithelial (CFBE) cells. Mutations in the CFTR protein cause the genetic disease Cystic Fibrosis (CF). To conduct this research, a tissue culture utilizing three main cell lines is being performed. The three main cell lines are CFBE-wild type, CFBE- Δ F508, and CFBE-41 \emptyset . CFBE-wildtype contains the normal, functional CFTR protein. CFBE- Δ F508 contains the nonfunctional CFTR protein as well as the mutation that is responsible for over 70% of CF cases. CFBE-41 \emptyset is the parental cell line and will function as a negative control. The main method used to determine the effects of the new compounds is Immunofluorescence Cytochemistry. Through this method, images are generated that identify the location of CFTR within the cell while maintaining the cell's integrity. These experiments are being run weekly to generate data via images captured by an immunofluorescent microscope.

Stephen Trest, Mississippi Gulf Coast Community College

The Bonnet Carre Spillway and Its Effects on South Mississippi's Economy

The Bonnet Carre Spillway is a flood control system located in Saint Charles Parish, Louisiana. In recent years, this spillway has been opened longer and more often than it had in the past. As a result, there has been a much larger quantity of fresh water in the Mississippi Sound, and this has killed a large quantity of marine life. This seriously impacts our local fishing economy. Many fishers have had to take entire seasons off because it would not be profitable to operate in these conditions. On top of the effects on fishing, the excess fresh water contributes to the flesh-eating bacteria outbreak which has plagued our beaches for years. 2019 was the first time in history that the Bonnet Carre was opened twice in one year, and it was also a particularly bad year for flesh-eating bacteria on our beaches; tourism is a major industry on the coast, and the beach is the main reason for that. We need a healthy Mississippi Sound for our coastal economy to thrive, and the repeated flooding of fresh water through the Bonnet Carre is negatively affecting that. Since flooding New Orleans is not an option, I will go over the other possible solution: restoring the Mississippi River Delta.