



Fall

UNDERGRADUATE RESEARCH
COLLOQUIUM
2019

"The Transformative Effect of
Interdisciplinary Research"

Keynote Speaker: Joël C. Johnson
Associate Professor of Music, ASU
Program Coordinator for Music Industry &
Modern Guitar Studies
Executive Faculty Senator
"BMI" Artist

BILLY C. BLACK BUILDING
8:00AM - 4:30PM

Albany State University 
CENTER FOR UNDERGRADUATE RESEARCH

1

NOVEMBER

ALBANY STATE UNIVERSITY UNDERGRADUATE RESEARCH SYMPOSIUM SPONSORS

Center for Undergraduate Research

The mission of the Center for Undergraduate Research at Albany State University is to promote a wide variety of undergraduate research, scholarship, and creative activities that support and enhance student learning, engage students and faculty mentors in the complete research process, and institutionalize undergraduate research as a vital component of the educational experience at the Albany State University.

Office of Title III Programs

The ASU Title III Program aims to strengthen the infrastructure of the University and to enhance the delivery of academic programs while developing students from freshmen to senior year. The implementation of these activities will increase enrollments, progression, retention, and graduation rates at Albany State University.

Office of Academic Affairs

The Office of Academic Affairs at Albany State University supports the University mission by providing the guidance and leadership necessary to maintain intellectual discovery, the foundation of the student experience. Academic Affairs upholds the standards and policies established by the faculty and administration, while overseeing all aspects of the University curriculum and encouraging students to become involved global citizens. Also, Academic Affairs provides support to assist administrators, staff, faculty, and students to realize their academic goals in pursuit of high academic achievement.

Office of Research and Sponsored Programs

The Office of Research and Sponsored Programs (ORSP) encourages, facilitates and supports Albany States University faculty and staff in their pursuit of external funding for their research, training, and other scholarly activities. ORSP provides high-quality services to the ASU community with the goal of increasing external sponsored funding for research and other programs while also protecting the University's interest assuring compliance with federal and state laws, rules and regulation.



Welcome to the Fall 2019 Undergraduate Research Colloquium:

I commend you, the student researcher, for taking an active role in your education. Knowingly or unknowingly, your intellectual curiosity has propelled you down the path toward research. I ask you to consider the reason you chose to engage in research, and I challenge you to leverage your experience to not only advance your knowledge about your area of research, but to also allow your research experience to expand the way you see your possible roles in the future. Students sometimes look at faculty with a sense of awe and amazement, because faculty can recall considerable information and usually provide citations for their claims from memory. How do you think faculty do that? Academia is brimming with brilliant people, some of whom might be geniuses, but genius or not, the people who do that probably have a few things in common. They were persistent, devoted considerable effort to learning about their area of interest, and usually failed a lot. Although it might have happened, I am not referring to failing classes. They had ideas that failed. Never be afraid of failure, but instead critically evaluate your failures and learn from them, especially in regards to research. When research does not find the expected, it has value, because it can eliminate a possible answer, which advances humanity nearer the truth.

Like you, I did my own research as an undergraduate student, and many of your mentors started out the same way. I firmly believe that Millennials and Generation Z are the smartest generations thus far. You are starting out the same way many of your mentors did, but you are different because you are part of the brightest generation. If we, faculty and mentors, can accomplish the things we have, you are genuinely capable of much more. One of my biggest hopes for the Center for Undergraduate Research is that we offer opportunities for students to grow as researchers and grow as people.

In the recent past students who had engaged in undergraduate research were an exception on graduate school applications. However, at present some graduate programs will only accept students who have research experience. If you decide graduate school is not for you, undergraduate research is still a valuable experience, because it causes you to learn to solve problems in new ways. In addition, your research experience will probably change the way you see the world. It helps you become a critical thinker, which is something valued by employers.

Increasing the number of undergraduate students engaged in research and increasing faculty involvement in mentoring undergraduate research are part of the goals for the Center for Undergraduate Research. In Fall 2019 we received 86 undergraduate research proposals – almost twice as many as last year – and went from 18 to 40 mentors. Although the Center for Undergraduate Research cannot fund travel, please consider seeking travel funds from other sources and presenting your research at other conferences. Presenting at other venues will broaden your perspective and might allow you to meet a future mentor. In addition, consider publishing your research in a peer-reviewed journal, because that also makes students more marketable. Continue to take charge of your education, and with hard work and perseverance, you can accomplish anything you desire.

Finally, I thank the ASU support staff, mentors, faculty volunteers, proposal reviewers, presentation judges, and student volunteers without whose help our colloquium would not be possible. I appreciate your efforts to support our wonderful ASU undergraduate researchers.

Sincerely,

Mark D. Thomas, Ph.D.
Director of the Center for Undergraduate Research at Albany State University

PROGRAM AGENDA

Friday, November 1, 2019

LOCATIONS:

Billy C. Black Auditorium
Billy C. Black Building 141, 143, 184, & 185
 Dr. Annalease Gibson, Presiding Officer

TIME	EVENT
8:00 a.m. – 8:25 a.m.	Colloquium Sign-In
8:30 a.m. – 8:50 a.m.	WELCOME <u>ASU Administrators:</u> President Marion Fedrick Dr. Angela Peters, <i>Provost & Vice President for Academic Affairs</i> Dr. Melanie Hatch, <i>Associate Provost for Academic Affairs</i> Ms. Saundrette Moody, <i>Director of the Office of Title III</i>
8:50 a.m. – 9:00 a.m.	ACKNOWLEDGMENTS: Dr. Mark Thomas, <i>Director of the Center for Undergraduate Research, Associate Professor of Psychology</i>
9:00 a.m. – 9:05 a.m.	INTRODUCTION OF KEYNOTE SPEAKER Dr. Annalease Gibson, Presiding Officer
9:05 a.m. – 10:00 a.m.	KEYNOTE ADDRESS/QUESTIONS & ANSWERS: Joël C. Johnson, <i>Associate Professor of Music Industry & Guitar, Coordinator of Music Industry & Modern Guitar Studies, Executive Faculty Senator, Albany State University</i>
10:00 a.m. – 10:05 a.m.	INTERMISSION
10:05 a.m. – 11:50 a.m.	ORAL PRESENTATIONS 1A, 1B, 1C, & 1D
12:00 p.m. – 1:00 p.m.	LUNCHEON (<i>Reserved for Colloquium Presenters & Respective Mentors</i>) Student Center Ballrooms 1 & 2
1:10 p.m. – 3:25 p.m.	ORAL PRESENTATIONS 2A, 2B, 2C & 2D
3:30 p.m. – 4:00 p.m.	INTERMISSION Billy C. Black Auditorium FINAL JUDGING TABULATION (<i>Faculty Judging Committee</i>)
4:00 p.m. – 4:30 p.m.	ANNOUNCEMENT OF PLACEMENT & ADJOURNMENT Billy C. Black Auditorium Dr. Annalease Gibson, <i>Presiding Officer</i> Dr. Zephyrinus Okonkwo, <i>Acting Faculty Judging Committee Chair</i>

Keynote Speaker

Joël C. Johnson

Educator/Guitarist/Composer



With 20 years of college teaching experience, hundreds of performances to his credit, Joël C. Johnson is a seasoned college educator and music artist. His professional focus is on music industry education and Jazz & popular performance styles.

A native of Orlando, FL, Prof. Johnson is an Associate Professor of Music Industry, serving as the coordinator of Music Industry and Modern Guitar & Orchestral Strings Studies at Albany State University. He holds a B.S. in Music Industry from South Carolina State University (SC), M.M. in Music Theory & Composition from Norfolk State University (VA), and is presently a doctoral candidate Ph.D. (ABD) in Interdisciplinary Humanities (Higher Ed. Admin & Music Ed.) at Florida State University (FL).

In addition to his appointment at Albany State University (GA), He held professorships at Norfolk State University, Hampton University (VA), SC State University, Florida Agricultural & Mechanical University (FL), North Florida Community College (FL).

As a professional artist (guitar), Prof. Johnson has performed in over 33 countries with world-renowned artists such as Dr. John, Fred Wesley & The New JB's, The Drifters, Kirk Franklin, Cody ChesnuTT...et. Al. He has recorded and arranged on several internationally released albums such as:

- M.I.L.E. High and The S.O.S. Band (2019). *Weekend Girl*. [CD] Atlanta, GA: Make It Look Easy, LLC. Available at: <https://www.amazon.com/gp/product/B07V45BKYC/ref=dmwsspsdp> [Accessed 22 Oct. 2019].
- ChesnuTT, C. (2014). *Landing On A Hundred: B Sides & Remixes*. [CD] Atlanta, GA: Vibration Vineyard/One Little Indian. Available at: <https://music.apple.com/us/album/landing-on-a-hundred-b-sides-and-remixes/825878127> [Accessed 22 Oct. 2019].
- ChesnuTT, C. (2012). *Landing On A Hundred*. [CD] Memphis, TN: Vibration Vineyard. Available at: <https://music.apple.com/us/album/landing-on-a-hundred/561804090> [Accessed 22 Oct. 2019].

Prof. Johnson has endorsements by Godin Guitars® and Lace Sensor Aluminetone® Pickups. In addition to his various accomplishments, he is also a member of AAUP, MEIEA, and The National Academy of the Recording Arts & Sciences.

**ORAL PRESENTATIONS 1A
ROOM 141
NON~STEM**

TIME	PRESENTER(S)	TITLE
10:05 a.m. ~ 10:20 a.m.	Diamond Johnson	DETERMINING MOTOR PERFORMANCE AND NEUROMUSCULAR IMBALANCES IN DIVISION II COLLEGIATE ATHLETES UTILIZING THE MODIFIED TUCK JUMP ASSESSMENT
10:20 a.m. ~ 10:35 a.m.	Ursula Netters	THE BUSINESS OF SMART CITIES: HOW TECHNOLOGY CAN BE USED TO IMPROVE ENERGY, TRANSPORTATION, AND UTILITIES
10:35 a.m. ~ 10:50 a.m.	Kayla Cooper	THE EFFECTIVENESS OF C.H.I.N.S.
10:50 a.m. ~ 11:05 a.m.	Charrel Hunter	PREPARING TEACHERS WITH A GLOBAL OUTLOOK: A COMPARATIVE STUDY OF TEACHING AND TEACHER PREPARATION IN SOUTH WEST GEORGIA AND GHANA
11:05 a.m. ~ 11:20 a.m.	Darius McElroy	LOWER INCOME AREAS AND UNHEALTHY FOOD OPTIONS
11:20 a.m. ~ 11:35 a.m.	Tavis Jackson	THE PREVALENCE OF OBESITY IN AFRICAN AMERICAN COMMUNITIES AND A NECESSITY OF EFFECTIVE INTERVENTION

**ORAL PRESENTATIONS 1B
ROOM 143
NON~STEM**

TIME	PRESENTER(S)	TITLE
10:05 a.m. ~10:20 a.m.	Destinee Anderson	THE NEXUS BETWEEN HYPER-AGGRESSIVENESS, POPULAR MUSIC GENRES, ACADEMIC ACHIEVEMENT, AND MIDDLE SCHOOL STUDENTS OF COLOR IN DOUGHERTY COUNTY, GA
10:20 a.m. ~10:35 a.m.	Jacob Serina, Adebisola Akinnubi, Jamiya Thomas, Macayla Patrick	WATER QUALITY MONITORING PROJECT OF THE FLINT RIVER IN ALBANY GEORGIA BY ALBANY STATE UNIVERSITY BIOLOGY UNDERGRADUATE STUDENTS IN BIOLOGY PROGRAM
10:35 a.m. ~10:50 a.m.	Tyler Lofton	UNEQUAL IMPACT OF CHARTER SCHOOLS IN MINORITY COMMUNITIES: A CASE STUDY OF SOUTHWEST GEORGIA
10:50 a.m. ~11:05 a.m.	Jeflyn Barnes	USING A MOBILE APPLICATION TO DETERMINE THE INFLUENCE OF A FIVE WEEK PROGRAM OF STATIC STANDING POSTURE IN UNIVERSITY FACULTY
11:05 a.m. ~ 11:20 a.m.	Breana Walters Lenee Blot	INCREASING RATES OF HIV IN DOUGHERTY COUNTY
11:20 a.m. – 11:35 a.m.	Keyshawn Morehead	ELIMINATING FOOD DESERTS AND THEIR ACCOMPANYING PUBLIC HEALTH CRISIS IN THE AGRICULTURAL SOUTH: A CASE STUDY OF THE CITY OF ALBANY

**ORAL PRESENTATIONS 1C
ROOM 184
NON~STEM**

TIME	PRESENTER(S)	TITLE
10:05 a.m. ~ 10:20 a.m.	Kayla Congress	PSYCHOLOGY AS A SCIENCE: AN ANALIZATION OF THE SCIENTIFIC HIERARCHY
10:20 a.m. ~ 10:35 a.m.	Nia Kimbro	DRY EYE SYNDROME IN THE AFRICAN AMERICAN COLLEGE-AGED POPULATION
10:35 a.m. ~ 10:50 a.m.	Adrian Starks	CREATE A VISUAL TIMELINE, FROM 1960 TO 2020, OF THE CIVIL RIGHTS MOVEMENT.
10:50 a.m. ~ 11:05 a.m.	Cianna Nix	INCIDENTS OF FALSE POSITIVE ROADSIDE FIELD TEST
11:05 a.m. ~ 11:20 a.m.	Janae Teemer	THE FOURTEENTH AMENDMENT AND THE EVOLUTION OF RACIAL VIOLENCE AND RESPONSE TO RACIAL VIOLENCE
11:20 a.m. ~ 11:35 a.m.	Amiralca Johnson	ECONOMIC GROWTH AND DEVELOPMENT IN THE CITY OF ALBANY-DOUGHERTY COUNTY
11:35 a.m. ~ 11:50 a.m.	Alaura Moore, Jayline Hilson, Jamila Minefee	THE RELATIONSHIP OF POVERTY ON FRESHMEN PREGNANCIES AT ALBANY STATE UNIVERSITY

**ORAL PRESENTATIONS 1D
ROOM 185
STEM**

TIME	PRESENTER(S)	TITLE
10:05 a.m. ~ 10:20 a.m.	Talyia Griffin	THE EFFECT OF LIGHT ON PATHOGEN DEFENSE IN PLANTS
10:20 a.m. ~ 10:35 a.m.	Leeanna Threats	REDUCED GRAPHENE OXIDE AS HOLE TRANSPORTING MATERIAL IN ALL-INORGANIC PEROVSKITE SOLAR CELLS
10:35 a.m. ~ 10:50 a.m.	Morgan Butts	CHARACTERIZATION OF THE LIGAND BINDING DYNAMICS OF ROVA (A TRANSCRIPTIONAL REGULATOR) IN YERSINIA SPP.
10:50 a.m. ~ 11:05 a.m.	Gabrielle Page	NOVEL PHOTOANODE IN DYE SENSITIZED SOLAR CELLS WITH PEROVSKITE AS SOLID STATE DYE
11:05 a.m. ~ 11:20 a.m.	James Robinson III Devonta Anderson	A CASE STUDY: ENHANCING STUDENT LEARNING AND SUCCESS IN COLLEGE ALGEBRA
11:20 a.m. ~ 11:35 a.m.	Chowon Han	FORENSIC IMPLICATIONS OF MICROBIAL SIGNATURES ON HUMAN TOUCHED OBJECTS FOUND IN OFFICES AND CARS
11:35 a.m. ~ 11:50 a.m.	NyKerria Leonard	THE EFFECTS OF NUTRITIONAL STATUS ON THE RNA/DNA RATIO IN FRESHWATER MUSSELS

**ORAL PRESENTATIONS 2A
ROOM 141
NON-STEM**

TIME	PRESENTER(S)	TITLE
1:10 p.m. ~ 1:25 p.m.	Hyojung Yoon	LACTATE KINETICS DURING VARIOUS RECOVERY MODE AFTER SIMULATION OF BASKETBALL COMPETITION
1:25 p.m. ~ 1:40 p.m.	Kia Taylor	IN A POPULATION OF COLLEGE STUDENTS, DOES ELECTRONIC LOW HEMOGLOBIN PATIENT EDUCATION IMPROVE HEMOGLOBIN LEVELS COMPARED TO PAMPHLET EDUCATIONAL TOOLS FOR LOW HEMOGLOBIN OVER A SIX-WEEK PERIOD?
1:40 p.m. ~ 1:55 p.m.	Anjane Foster	NURSE'S PERCEPTION OF ETHICAL TRAINING
1:55 p.m. ~ 2:10 p.m.	Darlana Mills	ALBANY STATE YOUTH ENRICHMENT PROGRAM 2019
2:10 p.m. ~ 2:25 p.m.	Ja'nae Gipson	PROPERTY TAX ASSESSMENTS USED IN SUPPORT OF SCHOOL SYSTEMS: TACTICS IN MARKETING TO CITIZENS
2:25 p.m. ~ 2:40 p.m.	Neanna Jones Okeethian Glanton	UNDERSTANDING THE DIFFERENT TECHNOLOGY PLATFORMS FOR INVESTING AND TRADING IN THE STOCK MARKET
2:40 p.m. ~ 2:55 p.m.	Nycole Thelwell	ENCOURAGING AFRICAN AMERICANS TO PARTICIPATE IN THE FINANCIAL MARKET TO ALLEVIATE POVERTY
2:55 p.m. ~ 3:10 p.m.	Trelawny Francis	SELLING SEXUALITY: THE COMMODITIZATION OF AFRICAN AMERICAN FEMALE IMAGES IN TRAP HIP-HOP MUSIC VIDEOS AND ITS EFFECT ON THE IDENTITY DEVELOPMENT OF ADOLESCENT GIRLS IN AFRICAN-AMERICAN COMMUNITIES
3:10 p.m. ~ 3:25 p.m.	Bionca Cummings	FROM THE RHYTHMS OF THE HEART TO THE RHYTHMS OF THE PAGE: HOW DO ELEMENTARY MUSIC TEACHERS MOTIVATE THEIR STUDENTS IN THE MUSIC CLASSROOM

**ORAL PRESENTATIONS 2B
ROOM 143
NON~STEM**

TIME	PRESENTER(S)	TITLE
1:10 p.m. ~ 1:25 p.m.	Tikayzia Reed Orlandra Williamson	ASSESSING THE DETERMINATES OF THE BLACK GENDER GAP IN GRADUATION RATES: EVIDENCE FROM THE US DEPARTMENT OF EDUCATION NELS LONGITUDINAL DATA
1:25 p.m. ~ 1:40 p.m.	Mary Bernadette Hernandez	THE SOCIAL-PSYCHOLOGICAL IMPACT OF SOCIAL MEDIA ON TEENS IN RURAL SOUTH GEORGIA: POSTULATING DURKHEIM'S IDEAS OF SUICIDAL BEHAVIORS, SOCIAL INTEGRATION, AND REGULATION
1:40 p.m. ~ 1:55 p.m.	Nya Burton	CORRELATIONAL STUDY: IN A POPULATION OF WOMEN ATTENDING AND ACADEMIC INSTITUTION, DOES BIRTH CONTROL EDUCATION IMPROVE THE WILLINGNESS TO USE BIRTH CONTROL?
1:55 p.m. ~ 2:10 p.m.	Antranette Leach, Tamia Hurst, JaLisa Covin	EXPLORATORY STUDY OF PSYCHOLOGICAL EFFECTS OF PHYSICAL CHILD ABUSE AMONG FEMALE STUDENTS ON ALBANY STATE UNIVERSITY CAMPUS
2:10 p.m. ~ 2:25 p.m.	Erria Gates	EDUCATION IN ALBANY
2:25 p.m. ~ 2:40 p.m.	Jamilah Hawkins	DEMOGRAPHICS OF TEACHERS IN SOUTHWEST GEORGIA
2:40 p.m. ~ 2:55 p.m.	Robert Lavender Jr.	MATHEMATICAL MODEL ON REFUGEE CRISIS IN GREECE
2:55 p.m. ~ 3:10 p.m.	Di'Andrea Malone	HOW HEALTH DISPARITIES DETER THE AFRICAN AMERICAN COMMUNITY FROM PARTICIPATING IN STEM CELL RESEARCH
3:10 p.m. ~ 3:25 p.m.	Kayla Congress	A META-ANALYSIS OF THE EFFECTS OF CHILDHOOD MALTREATMENT ON THE LIKELIHOOD OF COMMITTING CRIMES

**ORAL PRESENTATIONS 2C
ROOM 184
STEM**

TIME	PRESENTER(S)	TITLE
1:10 p.m. ~ 1:25 p.m.	Tavis Jackson	THE UNEMPLOYMENT EPIDEMIC IN NIGERIA
1:25 p.m. ~ 1:40 p.m.	Niagara Brooks	EXPLORING INTERVENTIONS PROVIDED BY PROFESSIONALS IN THE SCHOOL SYSTEM AND SOCIAL SERVICE PROGRAMS IN DOUGHERTY COUNTY FOR BIPOLAR DEPRESSION IN ADOLESCENTS
1:40 p.m. ~ 1:55 p.m.	Morgan Echols	CHARACTERIZING PROTEIN-PROTEIN INTERACTIONS IN MUSCLE CONTRACTION: MYOSIN AND TROPONIN
1:55 p.m. ~ 2:10 p.m.	Jatita Brown	IMPROVING ROOT SYSTEM ARCHITECTURE IN ORDER TO PRODUCE HEALTHY PLANTS IN ARID ENVIRONMENTS USING RHIZOBIUM-LEGUME SYMBIOSIS
2:10 p.m. ~ 2:25 p.m.	Tyshawn Ferrell	RNA:DNA RATIO BIOMARKER EXPRESSION IN FLINT RIVER FRESHWATER MUSSELS
2:25 p.m. ~ 2:40 p.m.	Nalani McLendon, Reagen Bruce, Alicia Lewis, Tatyonia Townsend	WATER QUALITY MONITORING PROJECT OF THE FLINT RIVER IN ALBANY GEORGIA BY ALBANY STATE UNIVERSITY BIOLOGY UNDERGRADUATE STUDENTS IN BIOLOGY PROGRAM
2:40 p.m. ~ 2:55 p.m.	Caylin Grant	MICROBIOME DIFFERENTIATIONS OF LOVE BUGS
2:55 p.m. ~ 3:10 p.m.	Oluwaseun Adelusi	BACTERIA CLASSIFICATION ON PEANUT, ORANGES FROM SOUTHWEST GEORGIA

**ORAL PRESENTATIONS 2D
ROOM 185
STEM**

TIME	PRESENTER(S)	TITLE
1:10 p.m. ~ 1:25 p.m.	Shacameon Wilson	MATHEMATICAL MODELING ON THE AVERAGE COST OF CRUISE VACATION AND THE PROPORTION OF AFRICAN AMERICAN PASSENGERS
1:25 p.m. ~ 1:40 p.m.	Mohammed Najeeb Browyn Foreman	REDUCED TOXICITY OF CESIUM LEAD HALIDE PEROVSKITES THROUGH MN SUBSTITUTION FOR AIR-STABLE SOLAR CELLS
1:40 p.m. ~ 1:55 p.m.	Ayomide Martins	MOLECULAR DYNAMICS AND INTERACTION OF GARCINIA KOLA
1:55 p.m. ~ 2:10 p.m.	Fiona Oriakhi	IDENTIFICATION OF COMMON FUNGI SPECIES (FUSARIUM SP. AND ASPERGILLUS SP.) FROM ENVIRONMENTAL WATER IN ALBANY GA.
2:10 p.m. ~ 2:25 p.m.	TyJa' Barnes-Jones	COMPARISON OF FACTORS THAT LEAD TO THE DEVELOPMENT OF CARDIOVASCULAR DISEASE IN SOUTHEAST ASIA, AFRICA, & THE AMERICAS
2:25 p.m. ~ 2:40 p.m.	James Robinson III	AN EXAMINATION OF MACHINE LEARNING WITH TENSORFLOW.JS
2:40 p.m. ~ 2:55 p.m.	Jasmine Prier	5G TECHNOLOGY FOR NETWORK

ABSTRACTS

BACTERIA CLASSIFICATION ON PEANUT, ORANGES FROM SOUTHWEST GEORGIA

Oluwaseun Adelusi¹, Dr. Olabisi Ojo²

¹Department of Science and Technology, (Biology) Major, Albany State University, Albany,

²Department of Biology, Albany State University, Albany, Georgia, 31705

The microbiome can be called a dynamic ecosystem where different species are found to communicate with associations based on a population. Furthermore, the symbiosis of the various bacterial species and their habits must be taken into account in the data analysis. Orange is a specie of citrus and there are different species of citrus such as lemon, mandarin (*Citrus aurantium*, *Citrus reticulata*) and are often referred to as bitter orange. The orange is a hybrid between pomelo (*Citrus maxima*) and mandarin (*Citrus reticulata*). Bacteria community of orange in are diverse like *Liberobacter asiaticum*, *Mycosphaerella citri*, *P. syringae* and other bacteria are yet to be identified in Georgia. Peanuts, which are sometimes called poor men's food, are affordable and adaptable to a variety of culinary uses making them the most consumed nut in most SSA regions (Kamika, 2017). These complementary foods may also be contaminated by microbiological agents (bacteria and fungi) such as *Aspergillus species*, mainly *A. flavus*, *A. parasiticus* and *A. flavus* and *A. parasiticus*. In recent decades, the worldwide prevalence of disease has increased. In this study, some of the microbial community interacting with both Oranges and peanuts fruit which are harmful to our health directly or indirectly and these have been found to accelerate food spoilage. This proposal aims is to a broaden study in Peanuts and oranges, testing the hypothesis that similar bacteria colonize both peanuts and oranges grown in Southwest GA. Sample collection: Peanut and orange samples were collected from the famers market in Albany GA in Zip Lock bags. The collection separately contained fresh fruits and partly damages fruits. Materials that were used and needed for sample collection which are zip lock bags, Peanuts, Oranges, Peptone water, micro centrifuge (bead beater), pipette, filter vacuum. Samples were collected by using washing the fruits in a zip lock bag for 5 minutes with peptone water and a vacuum filtration was carried out to collect the bacterial sample which was stored at room temperature until DNA extraction. DNA extraction will be carried out by using bead beater (3minutes followed by 30 minutes) for quality DNA. DNA extraction will be carried out by using residue collected through filter vacuum. The residue will be placed in tubes and DNA HS Assay kit. The extraction will be done using the procedures of the DNA kit; the total genomic will be stored at -20°C until it is processed for sequencing. PCR products will be analyzed on agarose gel electrophoresis, and viewed under UV trans-illuminator. We expect that the implementation of the proposal will result in quality DNA extraction that can be useful both for bacterial DNA detection and fruit microbial colonization by which different bacteria species of *Liberobacter asiaticum*, *Mycosphaerella citri*, *E. coli*, *A. flavus*, are expected to be found. This project would generate taxonomy tables for peanuts and oranges in Southwest Georgia and help in determine the endosymbiosis between the fruit and bacteria.

A CASE STUDY: ENHANCING STUDENT LEARNING AND SUCCESS IN COLLEGE ALGEBRA

Devonta Anderson
Dr. Vijay Kunwar
Albany State University, Albany, Ga 31705

This case study revolves around obtaining a data analysis on Albany State University students when it comes to the Gate Keeper course of College Algebra. These courses are required courses of all freshman students. It has been shown successfully that students in Gate Keeper courses will have an easier time through their college experience and are more likely to graduate in a timely manner. College Algebra is a challenging subject, but the factors of failure within the subject can be varied. Within the case study, the factors shown will be based upon the students' history with mathematics from high school, their knowledge of the basic fundamentals of mathematics, types of anxiety from the subject itself, and their overall views towards mathematics. This case study would also ask the students what they feel can help or improve test scores within College Algebra. The data collected within the case study will be a mixture of quantitative and qualitative data. Scores within College Algebra will be compared from pre-merger years to post merger to see if scores have declined or improved overall.

USING A MOBILE APPLICATION TO DETERMINE THE INFLUENCE OF A FIVE-WEEK EXERCISE PROGRAM ON STATIC STANDING POSTURE IN UNIVERISTY FACULTY EMPLOYEES

Jeflyn Barnes, Anna Fazio MS, CSCS;
Aram Yoon, PhD, CSCS; Timothy W. Hughley, PhD, ATC, LAT, CSCS, ACSM EP-C, NSCA-CPT,
EIM-2
Department of Health and Human Performance, Albany State University, Albany, GA 31705

Analyzation of the effects of an exercise program on postural stability through a low cost mobile application has the potential to correct posture and decrease pain associated with poor posture. Research indicates that many postural abnormalities occur in jobs that require employees to stay in static standing or seated positions for extended periods of time (Riegerova, Krejci et al. 2008). This project is comprised of an investigation into the influence of a five week exercise program on static posture in university faculty employees, as well as, the inter- and intra-rater agreement of static posture analysis utilizing the Posture Screen Mobile application. Employees of Albany State University will be recruited via an email. Upon selection, employees will fill out necessary paperwork and each employee's baseline posture and body composition will be assessed. The mobile application, Posture Screen, will produce anterior and lateral displacements. The displacements will reveal any deviations in the employees' posture. Each subject will then participate in a five week exercise program that will meet twice a week for forty-five minutes. Each exercise class will emphasize postural and corrective movement exercises. To fully examine the effects of exercise on each employee's posture, a second static posture analysis and body composition measurement will be conducted at the end of the five week exercise program. The data collected from this research has the potential to determine the effects of exercise on University employee's posture, as well as, further explore the homogeneity of the Posture Screen Mobile Application among users.

COMPARISON OF FACTORS THAT LEAD TO THE DEVELOPMENT OF CARDIOVASCULAR DISEASE IN SOUTHEAST ASIA, AFRICA, & THE AMERICAS

TyJa' Barnes-Jones¹ and Dr. Olabisi Ojo²

¹Department of Biological Sciences (Biology Major), Albany State University, Albany GA 31705

²Department of Biological Sciences, Albany State University, Albany, GA 31705

Over seventeen million people die each year from cardiovascular diseases (CVDs), estimated to be 31% of all deaths worldwide. The alarming statistical evidence of this top-death causing disease is astounding. This research will therefore investigate the unhealthy habits that ultimately result in CVD. This research will also analyze details of actual heart images in normal and in people with cardiovascular disease. We hypothesize that there is a direct correlation between poor health habits, such as high blood pressure, tobacco smoking, obesity, diabetes, and physical inactivity, and the development of CVD, and that this differs across regions of the world. We will compare statistical evidence and risk factors surrounding the standard of living and life expectancy in three regions of the world (Africa, Asia and the USA) with the prevalence of the different variations of CVD. Data will be collected from reliable resources, such as peer-reviewed periodicals databases including Galileo, PUBMED, WHO, TRD and the CDC, for analysis using EpiInfo®. Furthermore, an anatomical analysis of the normal heart compared to CVD-diseased heart will be made. Discovering the habits that cause CVD will benefit healthcare professionals greatly as it can inform their patients' habits and the recognition of disease symptoms earlier. Discovering a correlation between unhealthy habits and cardiovascular disease, will provide opportunity for further research to proactively make more impactful changes in the world. People can therefore be informed to let go of the unhealthy habits in hopes of living longer, healthier lifestyles.

EXPLORING INTERVENTIONS PROVIDED BY PROFESSIONALS IN THE SCHOOL SYSTEM AND SOCIAL SERVICE PROGRAMS IN DOUGHERTY COUNTY FOR BIPOLAR DEPRESSION IN ADOLESCENTS

Niacara Brooks¹

Dr. Annalease Gibson²

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The purpose of the study is to explore the interventions being provided by professionals in the school system and social service programs in Dougherty County. The research will pay attention to diagnosis and treatments for adolescent bipolar depression and the types of interventions for adolescent bipolar depression. The research questions that will be used to guide this research are as follows: Are there demonstrated signs and or symptoms of bipolar depression in Dougherty county schools who serve adolescents (ages 10-19)? What are the similarities and differences in services for bipolar depression among adolescents in the Dougherty County School System? What are the community based services offered in social service agencies in Dougherty County for bipolar depression in adolescents? Are community-based services programs involved in the school system? Researchers will implement qualitative and quantitative data collection through interviews and surveys of school social workers, school counselors, and professionals who provide services to adolescents with bipolar depression. The theoretical frameworks for this research are the Behavioral Approach Spectrum, dis-regulation theory, and social and emotional learning theory. It is anticipated that the interventions provided by both settings will be different in nature. It is further hypothesized that social service agencies are less involved in the school systems. The implications of this research will be used for assessing new services to benefit adolescents diagnosed with bipolar depression.

IMPROVING ROOT SYSTEM ARCHITECTURE IN ORDER TO PRODUCE HEALTHY PLANTS IN ARID ENVIRONMENTS USING RHIZOBIUM- LEGUME SYMBIOSIS

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Dr. Alan Wilson
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Climate change is rapidly affecting many outcomes in our surroundings daily, including plant growth by decreasing water availability and changing soil conditions. This research will provide a way to produce healthier plants in variable stressful, environmental conditions. Research shows Rhizobium (which is a bacterium that nitrogen fixes) can improve the root nodules of a host plant. In this study, we propose to use *Brassica rapa* as a plant host, expecting that it will properly react to Rhizobium in a way which will improve the roots. By manipulating different concentrations and dilution of the bacteria, we can change variables in a controlled environment. Analyzing and observing how the plant improves over weekly periods can alter the findings with this research. The end goal of this research is to find a way to better prevent harm to crops and come up with a solution for world hunger.

IN A POPULATION OF WOMEN ATTENDING AN ACADEMIC INSTITUTION, DOES BIRTH CONTROL EDUCATION IMPROVE THE WILLINGNESS TO USE BIRTH CONTROL?

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The proposed correlational study will examine the knowledge level of women about the different methods of birth control. The purpose of this study is to educate women ages 17-22 attending an academic institution on the pros and cons of different birth control methods to help them make a responsible choice that best suits them. The participants of this study will include 20-30 random female students who are currently enrolled at Albany State University. The participants will be asked to take a 10- question pretest before beginning the education powerpoint on the different methods of birth control. Participants will then be asked to complete a post-test to determine if additional education increased their willingness to take birth control. The goal of this study is to determine college women's level of contraceptive knowledge.

CHARACTERIZATION OF THE LIGAND BINDING DYNAMICS OF ROVA (A TRANSCRIPTIONAL REGULATOR) IN YERSINIA SPP.

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Yersinia is a pathogenic species that contains RovA (transcriptional regulator). Three of *Yersinia* species are pathogenic which can cause disease in humans: *Yersinia pseudotuberculosis*, *Yersinia pestis*, and *Yersinia enterocolitica*. RovA regulates expression of *inv* in *Yersinia* spp. RovA is a part of the MarR family which contains homologs in several species of bacteria and archaea, including all three pathogenic species of *Yersinia*. RovA is a master virulence regulator that controls the transcription of numerous

genes in *Salmonella enterica*. RovA protein forms dimers independent of DNA binding, stimulates RNA polymerase, most likely via its C-terminal domain, and counteracts transcriptional repression by the histone-like protein H-NS. RovA transcription in *Yersinia* is auto regulated by silencing the nucleoid related with H-NS. However, the binding mechanism and what binds RovA is not well understood. The goal of this proposal is to predict and characterize the ligand bindings of RovA proteins in *Yersinia*, associated with in silico using bioinformatic tools, to test the hypothesis that predicted ligand, binding pockets in RovA will reveal unique features of the protein, capable of binding to highly interactive drug-molecules, towards attenuating the H-NS in gastrointestinal infections. We will do this by achieving the following aims: 1) Sequence retrieval and determination by conserved domain search, homology modeling and visualization of 3D structure, of RovA structural properties; 2) in silico prediction and characterization of ligand-binding sites of RovA using FTMap servers. We expect that these series of predictive simulations will provide indications to possible binding pockets that will be useful and that can be further explored for screening of compound library with the RovA structures.

A META-ANALYSIS OF THE EFFECTS OF CHILDHOOD MALTREATMENT ON THE LIKELIHOOD OF COMMITTING CRIMES

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Is criminal behavior a random occurrence or is it a manifestation of trauma? Does crime stem from childhood trauma? Childhood trauma can be defined as physical abuse. The proposed research will analyze statistics relative to a criminal's childhood and use the data to decipher the correlation between childhood abuse on a person's probability to commit a violent crime: murder and battery. This research will talk about the correlation of physical abuse on black males between 18-25 years old and their likelihood to commit violent crimes. Research will focus on violent crimes committed by physically abused men between 18-25 year, and how childhood abuse can lead to untreated PTSD in children. Purpose of the study is to Research the relationship between physical child abuse and crime rates. This research is significant because data will show the adverse effects of childhood abuse on young males transitioning into adulthood. The methodology of this research will include analyzing a criminal's background. Also using statistics on African-American males in prison for violent crimes, statistics of violent criminals who were abused as a child and the long-term psychological effects of abuse.

PSYCHOLOGY AS A SCIENCE: AN ANALIZATION OF THE SCIENTIFIC HIERARCHY

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It has been debated whether psychology has gained significance in the field of science and if the contributing factor which categorizing it as a science has improved how the field is viewed. The placement of psychology as a science is due to many different factors. In the current research it will analyze if factors such as the inclusion of the word science, play a pivotal role in its classification. This research is important to help determine if this inclusion of the word science has a positive impact to how

individuals view this field or if there is less or more credence given with its terminology. Due to the presence of science within the definition someone would be least likely to classify it as a science. The current research will need prior IRB approval in order to interact with any participants first. The participants, approximately 120-130, will be University students at an HBCU over fifteen various majors and classifications the research will be divided into two parts: dichotomous yes or no question on whether each can be considered as a science and ranking each field from most to least Scientific. Students will be provided various scientific and nonscientific fields and given matching definitions in two sets: one with and without *science* contained to determine if it has an effect on classification. These definitions will be in five different combinations altering the pairing of different artificial and natural definitions. Students will also be tasked to determine whether each is a science based on the two given definitions this ensures unbiased answering from learned artificial concepts. Current research is expected to help not only determine why psychology is not considered a science. Also, help define what exactly is science and serve to clarify the scientific hierarchy.

EFFICACY OF THE C.H.I.N.S PROGRAM IN RICHMOND COUNTY

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CHINS stands for a Child in Need of Services. The four types of CHINS petitions are: “Runaway,” “Stubborn Child,” “Habitual School Offender,” and “Truancy”. The purpose of C.H.I.N.S. is to serve as a program usually a civil proceeding used by the juvenile court in order to get a child to comply with rules to change their behavior. The CHINS program allows the court to inflict certain conditions (curfew, counseling, etc.) and place the child in the custody of the parent/legal guardian which is qualified by the third party or Department of Child Services. If the juveniles’ data proves that they are successful with the CHINS. program, then we can conclude that the CHINS program is effective at reducing repeaters in the Juvenile Court of Richmond County. Data will be obtained from the Juvenile Court to identify the recidivism rate of those juveniles who are entered into the CHINS program. The potential impact is that if the CHINS program is effective in reducing recidivism among juveniles the program can be rolled out to other counties in Georgia.

EXPLORATORY STUDY OF PSYCHOLOGICAL EFFECTS OF SEXUAL CHILD ABUSE AMONG FEMALE STUDENTS ON ALBANY STATE UNIVERSITY CAMPUS

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Sexual child abuse has been correlated with higher levels of depression, guilt, shame, self-blame, anxiety, and dissociative patterns. These psychological effects have a major impact on an individual's life development. The purpose of this study is to gain an understanding on the psychological impact of sexual child abuse on students at a Historically Black College and University campus in southwest Georgia. The specific aim will be to raise awareness about the long-term effects from sexual child abuse. The quantitative research will be conducted to answer a set of exploratory questions: Does the abuse from

your childhood effect your relationship with others in your adult years? Is there a relationship between sexual child abuse and long-term cognitive effects in Albany State University female students? Does the child abuse have mental health effects as an adult? The study findings will explore if there is a connection with the female student body on Albany State University's campus and the long-term effects of child sexual abuse. The conceptual frameworks that enhance the understanding of child abuse, as outlined by some child abuse experts, include the epidemiological framework. A behavioral epidemiology framework is proposed to specify a systematic sequence of studies on health-related behaviors, leading to evidence-based interventions directed at populations. A cluster random sample will be used to select the participants.

**FROM THE RHYTHMS OF THE HEART TO THE RHYTHM OF THE PAGE:
HOW DO ELEMENTARY MUSIC TEACHERS MOTIVATE THEIR STUDENTS IN THE
MUSIC CLASSROOM**

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Student motivation is one of the most basic challenges in our classrooms today. Specifically, in the elementary music classroom, student motivation is the foundation for helping students acquire knowledge about the fundamental elements of music. This proposed research project will focus on student motivation and how the music classroom in elementary school affects student behavior in the field of early childhood music education in Dougherty County Public Elementary Schools. In this research project, at least six volunteer teachers from different elementary schools will complete surveys about how they motivate their students and behavior observations. Once surveys are completed, the researcher will visit each school and record multiple written observations about the behavior and attitude of the students in each music classroom. Each observation will focus on analyzing how teachers use their own technique to motivate the students. This project could be used as a tool to help other developing music education students at Albany State University learn about the importance of student motivation in classroom management. The main goal of this project is to determine which methods of motivation are being used and how are they effective in the music classroom. Teacher motivation methods are so important in shaping the perspective of young elementary students encountering the basics of musical development for the first time.

IDENTIFYING NOVEL PROTEIN-PROTEIN INTERACTIONS IN THE MYOCARDIUM

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Protein – protein (read protein to protein) interactions are responsible for the regulation of myocardial contractions. Cross bridges, which form between myosin and actin, are used by the myocardium to generate force, and their formation is regulated by regulatory proteins: troponin and tropomyosin. Myosin catalyzes adenosine triphosphate (ATP) to drive the contractile process, and the speed of this process correlates to the speed of ATP hydrolysis by the myosin head. Previous studies have suggested that

troponin plays a role in speeding up the ATP hydrolysis process, but these studies were done using non-physiological assays. Therefore, it has yet to be determined if, and to what extent, troponin accelerates the hydrolysis of ATP in myosin within actual myocardial tissue. In this project, we seek to identify and characterize the molecular and regulatory properties of the potential troponin-myosin interaction. Through the use of protein interaction predictive software, coupled with in vitro motility assays, seek to identify the chemical and physical interactions that occur between these two proteins, in hopes of determining how troponin accelerates ATP hydrolysis. The results of this project may help elucidate a smaller, yet important, regulatory process in myocardial contraction, and may provide information regarding this potential therapeutic target within the heart.

EDUCATION IN ALBANY

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Albany is a city located in the southwest region of Georgia. There are several counties that partake in Albany. In this paper, I will be focusing on Dougherty county and its education. I will portray education such that in Dougherty County education passes a success rate. Furthermore, I will create a math module to help produce a solution to increasing the impact of education in the city of Albany. As a result, this will help and contribute to the educational status both locally and nationally. The solution of the result will impact school districts by increasing the success rates in the Dougherty County School System. Results also can be used to compare its performance amongst others who do perform well in class settings. Lastly, results can be used locally and nationwide.

PROPERTY TAX ASSESSMENTS USED IN SUPPORT OF SCHOOL SYSTEMS: TACTICS IN MARKETING TO CITIZENS

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Property taxes fund local school systems. Such taxes are based on the assessment of property values. Few citizens understand the implications of property taxes on their individual lives. In addition, the decision to increase tax assessments means that citizens are impacted by the opportunity cost of using funds to pay for local school systems vs. using those funds to improve their individual lives. The purpose of this study is to analyze property tax assessments to understand the percent of funds used for education and other factors. The researcher will review popular press articles to understand how information is being disseminated to citizens, making them understand the impacts and implications of such assessments on their financial lives, even for those families with or without children in the K-12 system. The significance of the research will bring awareness to citizens who are unaware of how counties are using property tax money to pay for schools in their area. Questions asked: How much of citizen's money is being used in order to pay for a system that their kid(s) may or may not attend? What specifically are the pros and cons of property taxes on schools and citizens? What are the laws on how county/city officials set the amount? Who exactly is on the county commission and how were they elected? What is a special purpose local option sales tax and how county and city elects market it to citizens? We plan to recognize the fluctuation of property taxes over a 10-year period.

MICROBIOME DIFFERENTIATIONS OF LOVE BUGS

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Plecia nearctica better known as love bugs or honeymoon flies are species of march fly that originated from parts of Central America and the Southern eastern United States. This research is aimed at investigating the selectivity of using the ITS86F and ITS4, and the ITS1-F and ITS86R in amplifying fungi community on lovebugs and sex differentiation (male or female). Libraries will be constructed from PCR-amplified fragments, sequenced and compared against sequences deposited in GenBank. The results will show the specific selectivity of the following fungal: Ascomycetes, Basidiomycetes and Zygomycetes. Amplified products generated by the ITS86F and ITS4, and the ITS1-F and ITS86R which will be aligned with a range of fungi species. This will be the first reported use and assessment of the ITS86F and ITS4, and the ITS1-F and ITS86R primer's pairs in amplifying fungal community from love bugs.

THE EFFECTS OF LIGHT ON PATHOGEN DEFENSE IN PLANTS

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The research demonstrates the potential effects that light has on the welfare of plants regarding its defense against disease-causing pathogens. The identification of light as a factor in plant health can assist with management and production of viable crops so that there is a higher yield due to less plants being infected. The research is expected to analyze the efficiency of plant defense against pathogens in various levels of light intensities. Higher photosynthetic activity produces more starch, which in turn can be used as an energy source in the plant. Therefore, the hypothesis for this research is that with the incorporation of higher intensities of light, the plants would be less susceptible to infection, and *vice versa*. *Arabidopsis thaliana* will be used for the observation of plant host response, and *Pseudomonas syringae* will be incorporated as the pathogen. In this research, the number of surviving bacterial cells in the plant under the differing light intensities will be counted. In addition, plant cell death will be determined by using the infected leaves after three days of infection. The results are predicted to display a good correlation between the light intensity and the levels of plant defense against bacterial invasion. This research can be utilized within the agricultural field as a method of reducing pathogen infection and increasing crop yield.

FORENSIC IMPLICATIONS OF MICROBIAL SIGNATURES ON HUMAN TOUCHED OBJECTS FOUND IN OFFICES AND CARS

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The microbiome-based forensic applications have recently garnered interest as trace evidence in forensic sciences. Human touched objects found in a crime scene can be used as trace evidence for many forensic applications including microbiome analysis. To identify and classify such objects that are readily applied

for a microbiome analysis, we chose eight objects in three offices and six objects in three cars and extracted microbial DNA from those objects using three different commercial DNA isolation kits. We also recruited seven subjects to retrieve microbial DNA from their hands and ~ 12 objects in their offices. DNA was then extracted by using the DNeasy PowerSoil DNA isolation kit. Based on the DNA quantity measured by a spectrophotometer and a fluorimeter, DNA was extracted from most objects, but the yields were low. Keyboard, mouse and steering wheels showed the highest DNA yield among the objects found in Offices and Cars. Keyboard and mouse also yielded more DNA than other objects in seven subjects' offices. DNA yield of each object showed individual variability. The 16S rRNA gene sequencing is necessary to link the diversity of the microbiome on the objects to those found on subjects' hands.

DEMOGRAPHICS OF TEACHERS IN SOUTHWEST GEORGIA

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Teachers come from varying backgrounds. Rich, poor, rural and urban schools attract 'would-be' teachers from teacher preparation programs. Of the 27-counties served by Albany State University, what are the demographics of those teachers who are currently serving? According to Walker, "Black students who attend public schools are disproportionately taught by teachers from different ethnic or racial backgrounds. According to the U.S. Department of Education more than 35% of students are Black or Hispanic but less than 15% of teachers are Black or Hispanic. Only 2% of the teachers in the U.S. are Black males" (Walker, 2015). The purpose of this study is to better understand the regional implications of teacher diversity, or lack thereof. In other words, are these national statistics similar to or even grimmer for those living in rural educational systems? Results from the study can help to better understand the important role that HBCU teacher preparation programs play, the impact of teachers on the lives of African-American men, and further support ways in which non-traditional teacher preparation programs may better serve those in fragile communities. Data will be collected and categorized in order to gain a better understanding of the teacher marketplace.

THE SOCIAL-PSYCHOLOGICAL IMPACT OF SOCIAL MEDIA ON TEENS IN RURAL SOUTH GEORGIA: POSTULATING DURKHEIM'S IDEAS OF SUICIDAL BEHAVIORS, SOCIAL INTEGRATION, AND REGULATION

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There has been significant research conducted in recent years which shows how the media and other social media outlets impact and influence our youth when it comes to suicide. There has been an alarming increase in the number of teens who commit suicide solely based on the influence of media. One of the

goals of this research is to raise awareness about the importance of both familial and social integration and regulation in preventing suicide. Another goal is to educate individuals about the power of social media and its influence on teens' personal views about themselves, including thoughts of suicide and self-harm. The focus will be on a demographic that has been ignored. A major hypothesis in this work is the following: Are teens in rural South Georgia more heavily influenced by social media than teens in urban cities in the country? Surveys (using a rating scale) will be distributed to participating students in three rural high schools to gather the data. The surveys will assess the influence teens believe social media has on their psychological well-being. The significance of this research is two-fold. It will reduce the risk factors of suicide among teens in South Georgia by educating teens and their families about the importance of social integration and regulation. This study will be used as a resource for school counselors to use in workshops addressing suicidality among teens, to educate parents, and to help teens establish a peer support group.

PREPARING TEACHERS WITH A GLOBAL OUTLOOK: A COMPARATIVE STUDY OF TEACHING AND TEACHER PREPARATION IN SOUTH WEST GEORGIA AND GHANA

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Teaching in schools today demand enough knowledge about different cultures, people and teaching strategies that work well with them. Technological advancements and the unending search for innovative ideas in teaching and learning have spurred the need for new methods of teaching, understanding the children we teach and ultimately the diversity of cultures they bring to the classroom. There is also a need to know about best practices from other countries that can be incorporated in strategies used in American schools. This qualitative research compares teaching and instructional delivery in Ghanaian elementary and middle schools to those in Southwest Georgia. Data from personal experiences and interviews with teachers, administrators, parents, students, and stakeholders are analyzed and presented to support the differences and similarities in teaching within the two regions. The findings of this study present strategies for both pre-service and in-service teachers that can be incorporated in the classroom to improve academic success for students in the area of literacy.

THE UNEMPLOYMENT EPIDEMIC IN NIGERIA

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Over the years, unemployment has become a worldwide epidemic that has caused many individuals to experience poverty and a lack of education. It has become such a problem in Nigeria that the rates for this country increase by millions each year. Year by year, the statistics for unemployment exponentially grow. Due to these high rates, it has become a necessity to examine the unemployment dynamics to better understand the contributing factors and how they play a role in the statistical data. The purpose of this research is to examine data from multiple sources to show the pattern of growth, how the contributing factors support this growth, why some prevention strategies are not helping, and what the rates will be in the future.

THE PREVALENCE OF OBESITY IN AFRICAN AMERICAN COMMUNITIES AND A NECESSITY OF EFFECTIVE INTERVENTION

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Over the years, obesity has become a global epidemic due to its rising rates. Furthermore, it has been very prominent in African American communities due to a large scale of factors that are just out of their control. As a result, many prevention/intervention programs are needed to help remedy this worldwide issue. It has become a necessity to take an analytic approach to find the pattern of transition of obesity in these highly impacted communities. In this study, we go in-depth about obesity, the causes of it, the potential health risks, and the prevention strategies that could help lower the rates. Our final goal is to create a mathematical model that captures the obesity dynamics and displays the pattern of obesity growth among African American communities.

DETERMINING MOTOR PERFORMANCE AND NEUROMUSCULAR IMBALANCES IN DIVISION II COLLEGIATE ATHLETES UTILIZING THE MODIFIED TUCK JUMP ASSESSMENT

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This paper examines how common motor performance components and neuromuscular imbalances could contribute to non-contact ACL injury in female athletes using the modified Tuck Jump Assessment. Research indicates that female athletes have higher incidences of non-contact ACL injury than male athletes. To answer this, we will rate the film collected of 48 Division II collegiate athletes (24 male and 24 female) performing a series of tuck jumps using 8 undergraduate students from the Health and Human Performance Department as raters. Raters will watch and score this data using a modified scale (0-2) for the scoring criteria. These participants will score independently with no discussion amongst the raters. Approximately 1 month later, raters will score the videos again to determine intra-rater reliability. This study will investigate factors to determine the injury risk of ACL injuries based upon the modified Tuck Jump Assessment in Division II Collegiate Athletes. And also, help to identify the neuromuscular imbalances between African American Female Athletes and Male Athletes using the modified Tuck Jump Assessment criteria. Because of the repeated nature of the modified Tuck Jump Assessment, it provides an indication of the reactive strength capabilities and reflects the movement demands and high-risk mechanics involved in competition (Read, Oliver et al. 2016b). The results of this study could be used to develop preventive exercises as well as training regimens to aid in reducing non-contact ACL injuries in female athletes. Future research could support the effectiveness of these preventive exercises and training regimens for use in athletic programs.

REFUGEE CRISIS IN GREECE

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Greece has a long history of dealing with issues that threaten their way of life. Currently there is a single issue that has Greece again backed in the corner. The refugee crisis currently facing Greece and Europe is one that doesn't appear to be slowing down any time soon. Through tons of research we find that the crisis is affecting many aspects of the Greek way of life. Many include their economy, healthcare and tourism to name a few. There are many statistical tables available to represent the data on refugees coming into Greece. We have used this data from several sources and compiled a series of tables based on calculated constants used to predict the exponential growth of the refugee population in Greece through 2024. We will also explore many variables that we encountered along the way. These variables include population decline as a result of poor healthcare in the camps, rate of child birth within the camps, as well as many refugees fleeing to other countries and or gaining asylum. These variables will not only be incorporated to detail a more realistic calculation on future population growth, but also to show the magnitude of the issues that they face daily. As the number of refugees increase at the calculated rate, Greece must decide how to cope or resolve these issues. Through border security, granting asylum and employing the new citizens, or continuing to stock pile humans in unsanitary camps. Greece will find a way, it always has.

THE EFFECTS OF NUTRITIONAL STATUS ON THE RNA/DNA RATIO IN FRESHWATER MUSSELS

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The Flint River is known as one of the most polluted rivers in Georgia. Therefore, it is important to understand the water quality of this river since it serves as a major water source for different cities. One way to determine the water quality is by observing mussels. Mussels are bioindicators, which mean that they help indicate the status of an ecosystem's health. This is possible through examining their RNA/DNA ratios. RNA serves as a biomarker. Biomarkers are biological indicators that verify if something has changed within an organism. Moreover, the purpose of this experiment is to analyze the alterations in the RNA/DNA ratios in fed versus starved *Elliptio complanata* freshwater mussels. Previous studies concluded that marine mussels exhibited significant differences in their RNA/DNA ratios in the wild. We hypothesize that there will be significant differences in the RNA/DNA ratios between the fed and starved mussel groups. To begin, we will gather the mussels from the Flint RiverQuarium and separate them into six, ten-gallon tanks. Three of the tanks will contain the mussels that are fed phytoplankton and zooplankton. The remaining three tanks will contain the starved mussels. We will be sampling the mussels in seven-day increments using the NanoDrop Spectrophotometer and the AllPrep DNA/RNA Mini Kit. This is the first study conducted on a Flint River Species. The conclusions of this study will strengthen the partnership between ASU and the Flint RiverQuarium due to its association to help improve the water quality in the Flint River.

UNEQUAL IMPACT OF CHARTER SCHOOLS IN MINORITY COMMUNITIES: A CASE STUDY OF SOUTHWEST GEORGIA

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Charter schools across America have become a newly developed type of schooling that is funded by the government under the school system in that district. Charter schools have sparked an intense national debate about funding disparities between charter and public schools. Are charter schools draining resources away from school districts? Evidence shows public schools are facing major issues from low budget crisis, shortage of teachers/staff, and low standardize test scores. This is a major concern in rural communities of Southwest Georgia. Analyzing data from the Governor's Office of Student Achievement, the researcher found that only 27.5% of Dougherty County Schools' 3rd graders can read on or above their reading level. The state-wide average of 3rd graders reading on level is 46.9%. These findings asserts that there has been a major decrease in the academic proficiency of elementary age students. The research will explore possible explanations as to why this phenomenon exists. Discovering these revelations is essential to the overall academic and professional success of children raised in rural communities, particularly in areas where there is a majority-minority presence. During this study, the researcher will obtain data from local sources and interview local educators from both public and charter schools to get their perspectives on the issue; of such experiments in the fight to formulate better educational systems for k-12 minority students. This research will focus on providing analyses on data regarding the negative impacts charter schools are having on public school funding and test scores as well as minority communities.

HEALTH DISPARITIES BETWEEN ETHNIC GROUPS

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The study on health disparities will be conducted by an Albany State University to discuss the existing health disparities among different ethnic groups as well as solutions on reducing the health disparities. Research will be focused in the southwest area of Georgia on two college campuses. There will be a survey distributed on the Georgia Southwestern University campus as well as Albany State University students. Between 200 and 400 students will take the survey, the information will be evaluated to understand why there is a large differential in the health status of Caucasians and non-Caucasians. When surveying, it is imperative that the sample is diverse, therefore Georgia Southwestern will also be surveyed to combat the HBCU demographic at Albany State University. At the conclusion of the research, it is expected to find finances to play a large role in the hinderance of African Americas to receive health insurance. Like dominoes, this just rolls into poor health, increase in diseases while the life expectancy is decreasing. Health disparities can be eliminated, acknowledgement is the first step.

MOLECULAR DYNAMICS AND INTERACTION OF GARCINIA KOLA

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Garcinia is an edible seed which belongs to a unique group of plants that help organisms to adapt to stress by influencing multiple regulatory systems responsible for stimulus response coupling such as the immune system and act as a general anti-infective agent. It is found mostly in tropical rainforest region of Central and West Africa. Every part of the plant has medicinal value. In parts of Africa, Garcinia Kola seeds are used during traditional gatherings and It is still being consumed till today. They symbolize hospitality, friendship and respect which is the reason for the presentation of the seeds to guests at events. Garcinia kola has been known to have various physiological effects on animals. According to Esomonu et al. (2005), some of the physiological effects of the garcinia kola on animals are a relative decrease in hemoglobin, packed cell volume, and erythrocyte count although this differed between various animals. However, it should be noted that these values may not decrease below the accepted physiological range. This finding indicates that the Garcinia kola seed has no toxicological effect on animals considering that their concentration on erythrocytes is within the accepted physiological level. The hypothesis is to predict ligand binding pockets in a high throughput manner. The reverse docking methodology meets the required of current mechanistic investigation towards herbal medicine. To reveal the unique features of the protein, capable of binding to highly interactive molecule(ligand).

THE RELATIONSHIP OF POVERTY ON FRESHMEN PREGNANCIES AT ALBANY STATE UNIVERSITY

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Georgia's percentage of teenage pregnancies in 2017, compared to the number of live births per 1,000 females between the ages of 15-19, is 21.9%, which is moderately high on the charts coming from the Center of Disease Control (CDC, 2019). This would mean that the pregnant teenage freshman would have to plan to make a living for themselves and the child either at the university or off of campus. This study will explore the relationship poverty has on pregnant teenagers who are freshmen at Albany State University. We will also explore if governmental assistance may be a need. The research questions that will guide our study are: Is there a relationship between poverty and freshman pregnancies at Albany State University, what are the factors that causes a young lady who is pregnant and a freshman at risk of poverty? And what does poverty mean to the freshmen on campus? It is our aim to select ten participants who are female freshmen currently expecting or know someone who is expecting. In each first-time freshman introductory course, surveys will be given to female students expecting and/or friends of expecting freshmen. The focus of the survey questions will be: poverty, income, current housing, and affordable childcare. The hypothesis of this research is that more governmental assistance is needed, and that affordable housing is in place.

ELIMINATING FOOD DESERTS AND THEIR ACCOMPANYING PUBLIC HEALTH CRISIS IN THE AGRICULTURAL SOUTH: A CASE STUDY OF THE CITY OF ALBANY

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The United States Department of Agriculture (USDA) defines food deserts as parts of the country – usually impoverished areas – where fresh fruits, vegetables, and other healthy whole foods are lacking. Others consider food deserts to be places where residents do not have access to affordable nutritious foods like fruits, vegetables and whole grains. Typically, a low-income community located more than one mile from a reliable source of fresh, healthy foods is considered a food desert. According to the USDA, more than 35.5 million people in the United States live in areas without access to supermarkets or other stores selling a variety of affordable healthy food options (Maria Trimarchi, USDA 2019). This makes food desert a menace to public health, considering the sheer number of people affected. Concerning the state of Georgia, a 2015 investigation by the Atlanta Journal Constitution (AJC) reveals that nearly 2 million Georgia residents, including about 500, 000 children live in food deserts. (Christie Bonds Staples, AJC March 2015). While these occur mainly in cities and suburban centers, small cities like Albany and other rural communities are not spared. The researcher will spend the fall semester reviewing relevant literature about the phenomenon of food deserts that have become such a threat to rural counties across the United States, with particular reference to Albany, Georgia. The researcher will interview local experts to get their perspectives on the phenomenon of food deserts in Albany, Georgia. The researcher will obtain data from local sources to find a connection between the target population and local grocery stores, and the negative impact food deserts are having on the target population. The project will be completed in the Spring 2020 semester with surveys of target populations and all stakeholders concerning the negative effects of food deserts, critical analysis of these surveys, as well as recommendations for the possible eradication of food deserts in the Albany area.

LOWER INCOME AREAS AND UNHEALTHY FOOD OPTIONS

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In the United States, there is a large problem with obesity and heart problems, especially in lower income areas. This research will attempt to cover the causes and discover possible solutions to lowering these rates. One major possible cause is the prevalence of cheap, but unhealthy food options that are regularly present in lower income areas. Due to the fact that, on average, fresh, healthy foods that are low on processing are more expensive than the highly processed fast foods, many lower income areas will go with the cheaper options to feed their families, leading to unhealthy diets causing obesity and various heart problems. A possible solution to this could be to provide businesses and these lower income areas some sort of monetary benefit (such as tax breaks or stipend) for providing healthier options to the public for lower cost. This combined with providing knowledge to the public of proper diets could lead to more lower income areas adopting healthier diets that they can afford.

REDUCED TOXICITY OF CESIUM LEAD HALIDE PEROVSKITES THROUGH MN SUBSTITUTION FOR AIR-STABLE SOLAR CELLS

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The newly emerging perovskite solar cells have enjoyed more and more attention in the past several years as they demonstrate a promising vista toward the new generation solar cells. Nowadays, the highest power conversion efficiency has already exceeded 23.0%. However, the quick degradation and the toxic issue of perovskite in ambience, particularly for Lead-based CsPbX_3 ($x=\text{Cl, Br and I}$), greatly thwart their real world applications. There have been tremendous efforts devoted to addressing these issues. Besides tuning the substitution on X position, the introduction of dopants on Pb position has been attempted and proven to be an effective means to control the intrinsic opt-electric properties of perovskite, concomitantly, reducing the toxicity of lead-based compounds. In this project, Mn is doped to partially replace Pb to modulate the electric and optical properties of Lead-based CsPbX_3 semiconductor nanocrystals. At this stage, $\text{CsMn}_x\text{Pb}_{1-x}\text{Br}_3$ exhibits better light harvesting properties, revealed by Uv-vis absorption. The quality crystallinity and morphology are introduced by Mn dopant as well, which are portrayed by X-ray diffraction. Later on, $\text{CsMn}_x\text{Pb}_{1-x}\text{Br}_3$ based solar cells will be constructed in order to evaluate photovoltaic performance and stability.

THE BUSINESS OF SMART CITIES: HOW TECHNOLOGY CAN BE USED TO IMPROVE ENERGY, TRANSPORTATION, AND UTILITIES

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The purpose of this research is to explain how applying smart technology, such as the Internet of Things, can be used by cities to advance their energy, transportation, and utilities. In this research, the performance of these three things in cities utilizing traditional methods and cities utilizing smart technology will be compared. This research will focus on the micro and macro portion of how smart technology has begun to be incorporated into everyday life, from items such as handheld devices, kitchen appliances, and alarm systems to energy-conserving devices, city infrastructure, and heating and cooling systems. Through interviews with information technology professionals, Water, Gas, and Light employees, and traffic regulators, I plan to investigate how cities replacing old methods with more efficient and reliable methods can benefit from these changes in the short-run and the long-run. Initial research has determined that the use of such technology has increased steadily in the past few years and will continue to do so astronomically in the next decade. Moreover, it is relatively easy to observe that smart technology has already become an irreversible part of our lives because we are extremely dependent on it in micro and macro aspects— both in people's homes and cities. The results of this research should encourage all cities to start using smart technology to provide energy, transportation, and utilities to their citizens.

INCIDENTS OF FALSE POSITIVE ROADSIDE FIELD TEST KITS

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In the early morning hours of July 31, 2019, Shai Werts, the starting quarterback for the Georgia Southern football team, was stopped for speeding in rural South Carolina. Deputies noticed a white substance on the outside of his car and believed it was cocaine that he had tried to dump out before stopping for the deputies. One of the deputies used a roadside drug test kit, commonly referred to as a field test kit, on the white substance. According to the deputy, the white substance was positive for cocaine. Werts insisted it was just bird droppings. Werts was charged with possession of cocaine and taken to jail. The white substance was sent to the state crime lab for analysis, which determined that the substance was not cocaine. The charges against Werts were dropped. This case is one example of many in which a field test kit has returned a false positive resulting in the arrest of an innocent person. Law enforcement officers across the U.S. use these field test kits to routinely test substances in the field. The tests are presumptive and only provide an initial indication. The substance must be tested by a certified lab for evidentiary purposes in court. Scientists have found many common items that can falsely test positive with field test kits. The proposed research will examine the prevalence of false-positive field test kits resulting in an arrest. Open resources will be researched to identify cases of false arrests and the substances that return false-positive results.

IDENTIFICATION OF COMMON FUNGI SPECIES (FUSARIUM SP. AND ASPERGILLUS SP.) FROM ENVIRONMENTAL WATER IN ALBANY GA.

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This proposal is to recognize microbes such as fungi that can be found in the aquarium water, using the samples provided by Flint RiverQuarium (FRQ). Previous studies have focused on the biodiversity of micro-fungi in water systems, In this research, we want to detect fungi DNA from the Flint RiverQuarium (FRQ) water body, testing the hypothesis that Flint RiverQaurium contains *Fusarium* sp. and *Aspergillus* sp. Water samples will be collected in sterile glass containers from 6 locations around the Flint RiverQaurium. 0.22 micron filters will be used to extract microbes, from where we will extract the DNA, using a protocol that includes homogenizing the sample particles in the filter samples. Polymerase chain reaction (PCR) will be used to amplify the DNA extract, to detect the fungal DNA. For *Aspergillus* sp., we will use 18S rDNA primers and cycling conditions denaturation at 94°C for 4 mins. And for *Fusarium* sp., we will use FA and Ra primers and cycling conditions 5 min at 95°C. Data collected will be analyzed for gel electrophoresis of amplified. DNA by PCR amplification. The expected result should provide establish a method for fungi detection locally, for understanding which fungi species are associated with animals in Flint RiverQuarium.

CAN I USE SELF-CARE TO PREVENT ME FROM GETTING AD OR OTHER RELATED DEMENTIA: AN EXPLORATORY SURVEY OF ADULT CHILDREN OF PARENTS WITH AD/ORD

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Adoption of a healthy lifestyle can assist in slowing physical and cognitive decline in middle-aged adults. Weinstein (1988) noted that using a precautionary adoption process model suggest that the perceived vulnerability to health decline can encourage preventative health behaviors. Additionally, those individuals who exhibit an internal locus of control (LOC) are more likely to engage in problem focused behaviors when confronted with the possibility of having a life-threatening disease/illness. Thus, we believe that adult children of parents who have a diagnosis of AD/ORD will alter their behaviors (both environmental/sociological) to negate or postpone the effects of AD/ORD.

5G TECHNOLOGY FOR ARTIFICIAL INTELLIGENCE

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In this research, we will be surveying the multiple generations of wireless cellular technology, starting from the first generation to the fifth generation of wireless cellular technology and its connection with artificial intelligence. The first generation of wireless cellular technology dates back to 1981, when wireless cellular technology was used to allow the user the ability to communicate in analog signals using the phone. A decade and a year later, 2g appears in 1992, allowing the user to communicate in digital signal. Shortly after this in 2001, the third generation of wireless technology was created. In this generation, it allowed the user to visit sites, share images, and track GPS location. Our current generation was introduced in 2011, 4g. 4g provided advanced web content, known as the smart phone. The newest generation has yet to be unveiled in the United States though a few countries have gained control over it, 5g. This study will provide information on 5g technology and how it impacts the world around us and when combined with artificial intelligence will improve our everyday life. We will also be analyzing the fight between the United States and a company in China by the name of Huawei. At the moment, the United States has enlisted more than 40 of Huawei's companies onto its entity list that restricts trade between them and companies located in the states. With information, we hope to inform the audience about 5g and the great impact that it will have on our society.

AN EXAMINATION OF MACHINE LEARNING WITH TENSORFLOW.JS

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In this research project, we will examine how machine learning is implemented in a web-based software package called TensorFlow.js. TensorFlow is a major tool used to integrate machine learning algorithms into web and mobile based devices. Machine Learning algorithms are increasingly being used to help in decision making, pattern recognition, and early warning and alert systems. Thus, it is important to understand and find out benefits and shortcomings of the tools used to construct new models based on machine learning algorithms, like linear regression algorithms, gradient descent algorithms, classifiers including the nearest neighbor algorithm, and data clustering including the k-means algorithm. In TensorFlow, models are one of the primary abstractions used, because models can be trained, evaluated, and used for prediction. A model that is trainable must change the values in a graph to get new outputs with the same input. Furthermore, models are a collection of layers and many machine learning models in TensorFlow are expressible as the composition and stacking of simple layers. We will study these Machine Learning features and language constructs in TensorFlow.js which enables artificial intelligence applications to be developed. Specifically, we will take a deeper look at how TensorFlow.js trains models and to what extent different learning algorithms can be implemented. Finally, we will communicate our findings and make recommendations for future study.

LASTING IMPRESSIONS: A VISUAL HISTORY OF THE LOCAL AND NATIONAL EVENTS OF THE CIVIL RIGHTS MOVEMENT

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The Civil Rights Movement is commonly described as the struggle African Americans endured in a fight for *social justice* (Eskew, 1997; O'Reilly, 1988; Dierenfield, 2013; Dupont, 2017). Social Justice is a term that describes the equal distribution of wealth and opportunities within a society (Dierenfield, 2013). The purpose of this research is to explore the events leading up to and during the Civil Rights Movement using visual representations of the impact the Movement has had on present day experiences and occurrences. Specific objectives include 1) providing a context and narrative for the Civil Rights Movement by creating a VISUAL timeline, identifying key events that occurred both nationally and locally (Southwest Georgia) as a part of the Civil Rights Movement, and 3) connecting historical photographs with current visual reactions from current ASU students via drawings, photographs, and other visual reproductions. The analysis for this project consists of pulling together the images garnered in timeline format. Essentially, the images will be used to tell the story of the Movement on both a national and local scale. This particular research will provide a local context for the Movement. It will also incorporate several different disciplines including Political Science, History, and Visual Art. Resulting artifacts will be displayed in local art shows while the resulting text of the project will be submitted for publication.

THE FOURTEENTH AMENDMENT AND THE EVOLUTION OF RACIAL VIOLENCE AND THE RESPONSE TO RACIAL VIOLENCE

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This research proposal will observe the average college student's knowledge about the negative aspects of the 14th amendment and the evolution of racial violence and how to respond to this. This study will take information that is known and assumed and show how knowledgeable students at a Historically Black College and Institution (HBCU) are about the 14th amendment and its lasting effect on the African American population. The participants will consist of 20 students from the institution, including all classifications. The participants will be issued an online questionnaire consisting of 5 questions inquiring about their knowledge of the 14th amendment and the evolution of and response to racial violence. Along with the interviews and surveys I will conduct my own research using historical and archival data for support and historical context. The proposed research will determine just how much students at an HBCU know about their history and if they understand how they are still being affected by the decisions of the past. It is important to understand what happened in the past so that we are able to learn from it and not make the same mistakes.

REDUCED GRAPHENE OXIDE AS HOLE TRANSPORTING MATERIAL IN ALL-INORGANIC PEROVSKITE SOLAR CELLS

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Perovskite solar cells has demonstrated the unprecedented performance, which attracted tremendous attention. However, there have been some challenging issues. The instability of organic-inorganic hybrid perovskite prevents practical applications. Meanwhile, the lack of ideal hole transporting materials can further thwart the progress for the perovskite solar cells. We hypothesize that perovskite solar cells with moderately reduced Go, as hole transporting material, can achieve the competitive power conversion efficiency and a long term stability. The objectives include: developing stabilized all-inorganic CsPbX₃(x=Cl, Br or I) perovskites solar cells to achieve the competitive power conversion efficiency and identifying the ideal hole transporting material to further improve the overall performance of perovskite solar cells. Our method will include: A one-step solution method that will be adopted for all-inorganic CsPbX₃(x=Cl, Br or I) Perovskite and then spin-coat into thin films; x-ray diffraction will characterize the chemical composition of perovskite; scanning electron microscope will study the morphology; for hole transporting material, moderately reduced GO will be utilized as HTL; moderately reduced graphene oxide sheets by post thermal treatment of spin-coated GO films with low temperature in open air will be employed as HTL to enhance the overall performance of Perovskite SCs; and by following the standard method to construct solar cells. The performance will be evaluated by the I-V characterization. We expect to find the ideal hole transporting material that will further improve the overall performance of perovskite solar cells. The results can be used to understand how to develop high efficiency solar cells.

INCREASING RATES OF HIV IN DOUGHERTY COUNTY

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Dougherty County is located in the city of Albany, which is one of the smallest cities in Georgia. Although this county is in a small town, it is deemed as one of second highest HIV diagnosis rate in the state among reporting counties at 63.9% per 100,000 supported by some data collect by the CDC (Beeson, 2016). The city of Albany was not as popular until the Albany state university was established. Which attracted residents from various cities of Georgia, such as Atlanta, Columbus, Macon, Savannah, and other large cities in Georgia and some from the state of Florida; but mostly from Atlanta. Atlanta is one of the largest cities in Georgia and is deemed as the state's capital. This city is reported as having HIV spreading faster than Dougherty County and this county is named Fulton County. Where the rate is 68.8 people per 100,000 (Beeson 2016). Indeed it is a coincidence that most Dougherty county is number 2 in the spreading of HIV, while currently housing residents who are originally from Fulton County. With Dougherty County receiving those who come from large cities, this county holds a poor value of medical assistance. It is our goal to minimize the risk of infection in this area, and target the truth behind this disease; whether it was deemed as man-made or as a natural illness.

ASSESSING THE DETERMINANTS OF THE GENDER GAP IN GRADUATION RATES: EVIDENCE FROM THE US DEPARTMENT EDUCATION NELS LONGITUDINAL DATA

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The purpose of this study is to utilize data from a Nationally Representative sample to test competing predictions from two prominent sociological frameworks regarding gender differences in academic achievement amongst African American undergraduates. In particular, the traditional Neoclassical Human Capital and the more contemporary resistance framework will be used to test research hypotheses regarding the determinants of gender differences in academic achievements among African Americans. Methodologically, we use a logistic regression equation to regress a vector of independent, sociological, psychological and structural variables on a dichotomous dependent variable on graduation gender differences in 4-6 year graduation rates. We are convinced that findings from this study have the potential to fill a conspicuous gap in the racialized educational literature on black male underachievement. In this regard, our findings have the potential for establishing a firmer basis for framing educational and policy debates regarding the seemingly intractable problem of black male underachievement. In sum, our study concludes with a discussion and recommendation on policy prescription geared to mitigating the contemporary black gender gap in academic achievement among African American collegians in the US.

ALBANY STATE UNIVERSITY UNDERGRADUATE RESEARCH COLLOQUIUM

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