



2024

Graduate Faculty Research

Colloquium

“Innovating Through Collaboration”

THURSDAY, OCTOBER 31, 2024

EAST CAMPUS BALLROOM

9:00AM TO 3:00PM



ALBANY STATE UNIVERSITY

GRADUATE SCHOOL

GRADUATE FACULTY RESEARCH COLLOQUIUM

Graduate School Mission

The purpose of the Graduate School at Albany State University is to define and promote excellence in graduate education and the research and scholarly activities associated with it. In concert with the College of Arts and Sciences, the College of Business, Education and Professional Studies and Darton College of Health Professions the Graduate School establishes a high standard of intellectual excellence and ensures the application of that standard in discussions, deliberations, and decisions about faculty, students, curriculum and research direction. The Graduate School is centered on academic issues and on enhancing scholastic excellence in the recruitment, admission, and matriculation of graduate students.

Graduate Faculty Research Colloquium Mission

The mission of the Albany State University Graduate Faculty Research Colloquium sponsored by the Graduate School is to promote research, scholarship, and creative activities among faculty and sharing the results of those research, scholarship, and creative activities with the University Community and community in general. The colloquium provides an excellent opportunity and a venue where faculty who may have already presented the results of their results to an external audience can come and share these research, scholarship, and creative activities with the campus community and community in general. Faculty who are also formulating new research thoughts and agendas/ideas may also present/share these new research thoughts and ideas to the campus community, thus making the colloquium a micro venue to explore new research thoughts and ideas.

Office of Academic Affairs

The Office of Academic Affairs at Albany State University supports the University's mission by providing the guidance and leadership necessary to maintain intellectual discovery and scholarship activity among faculty. Academic Affairs upholds the standards and policies established by the faculty and administration and provides support to assist to faculty in engaging in research and scholarship endeavors.

Administrative Support



“Thank you, Faculty, Graduate School Staff and the Research Colloquium Committee for your unwavering support of our graduate program and students. Today is an exciting day as we witness the impactful research that is being conducted by our students, along with faculty mentors. Every one of the faulty mentors has left a lasting impression on their students. Please accept my sincere appreciation for the hard work and passion that truly comes through as you Inspire our students every day.”

Go Rams!!!

Dr. Rhonda Porter, Interim Provost and VPAA

Dean's Welcome Letter

Dear Faculty and Colleagues,

It is with great enthusiasm that I welcome you to our third annual Graduate Faculty Colloquium. The Graduate School extends our warm and deep congratulations to all faculty who are participating and supporting our annual graduate faculty research colloquium. The Graduate School is pleased to work with dedicated faculty who have embraced our vision which provides our faculty researchers the opportunity to showcase their research endeavors with colleagues and the campus community.

So, as we gather here today, we celebrate not only the dedication and hard work that each of you brings to our graduate programs but also the collaborative spirit that defines our academic community.

This year's theme, "Innovating Through Collaboration," encourages us to explore new frontiers in research, teaching, and mentorship. We have an exciting agenda filled with insightful presentations, engaging discussions, and opportunities to connect with one another. I urge you to take full advantage of these moments to share your experiences and ideas, as it is through our collective efforts that we can continue to enhance the graduate experience for our students.

I want to extend my gratitude to all of you for your commitment to excellence in graduate education. Your passion and expertise not only inspire our students but also foster an environment of intellectual curiosity and growth. Together, we have the power to shape the future of our programs and the success of our students.

Finally, on behalf of all Graduate School Staff and the Graduate Faculty Research Colloquium Committee, I thank the Interim Provost and Vice President for Academic Affairs, Dr. Rhonda A. Porter, and her office for their support of this event and their unflinching, resolute, and unbendable support of Graduate School. I extend our deepest gratitude to all faculty from all the three colleges who are participating as presenters and for supporting us in promoting research and scholarship in this manner. Please note that the significant interest you have shown and the speed of your response in submitting abstracts demonstrates the need and desire among faculty to create such an opportunity where they can demonstrate their research and creative abilities on campus. Your participation and support are greatly appreciated!

Thank you for being here, and let's make this colloquium a memorable and productive experience.

Warm regards,

Charles O. Ochie, Sr., Ph.D.
Dean, Graduate School

PROGRAM AGENDA

Thursday, October 31, 2024

Location:

East Campus Student Center Ballroom

Dr. Erica DeCuir, Dr. Niamul Kabir and Dr. Annie Lewis, Moderators

TIME	EVENT
8:00 a.m. – 8:50 a.m.	Colloquium Registration
9:00 a.m.	<p>Welcome – Dr. Charles O. Ochie – Dean</p> <p>Opening remarks – Dr. Rhonda Porter – Interim Provost / VPAA</p> <p>Introduction of Moderators – Dr. Charles O. Ochie – Dean</p> <p style="text-align: center;"><u>Presentation/Session I</u></p> <p>Dr. Alex Alochukwu Mathematics in Drug Discovery: Chemical Graph Theory Insights</p> <p>Anne Bassey, Abdul Aidoo, Ihuoma Ohamadike Social Determinants on Purchasing Behavior of Users Networking Sites</p>
9:10 a.m. – 10:30 a.m.	<p>Jerry Daniel, Jamie Swain, Barbara Nowak, Ihouma Ohamadike, Jasmine Moore Evaluation of a HBCU Master of Social Work Program: A Retrospective Examination of the First Ten Years</p> <p>Shohana Huq Taxonomic Problem Solved by Molecular Cytogenetics using Conventional and Advanced Karyotype Analysis</p> <p>Md Niamul Kabir The Effect of Elevated Hydrostatic Pressure, Caprylic Acid, Carvacrol, Citrospet, Citricidal and Lactic Acid for Inactivation of <i>Listeria monocytogenes</i> at 4 °C and 45 °C</p>
10:30 a.m. – 10:45 a.m.	<p style="text-align: center;">Short Break</p> <p style="text-align: center;"><u>Presentations /Session II</u></p> <p>Jennifer Jenkins Post-Secondary Options and Considerations with Adolescents with Autistic Spectrum Disorder</p> <p>Anta’Sha M. Jones Does Environment Matter for Healthy Eating in Geriatric Rural Communities</p>

10:45 a.m. – 12:30 p.m.	<p>Floyd Nelson Understanding Pain Management in Hospice, For the Family</p> <p>Amaechi Nwaokoro Linking Asset’s Risk to Asset’s Return from a Risk-Free Asset, and to Other Market Characteristics</p> <p>Summer Odom Implementation of a STI Risk Behavior Reduction Program for University Students</p>
12:30 p.m. – 1:00 p.m.	Lunch
1:10 p.m. – 2:30 p.m.	<p style="text-align: center;"><u>Presentations /Session III</u></p> <p>Robert Owor & Noella Mwangoka The Design of a Wearable Automated Insulin Delivery System (WAIDS)</p> <p>Arun Saha Controlling Electrical Property of Material</p> <p>Jennifer Snelling The Importance of Repairing a Broken Education Reform: Should Eliminating Every Student Succeeds Act (ESSA)/Race to the Top (RT3) in the New Presidential Administration be the Solution?</p> <p>Nadeepa Wickramage Spatio-temporal Crime Forecasting</p> <p>Dr. Nneka Nora Osakwe Writing Effective Research Abstracts</p> <p>Devi Akella The Dark Side of Entrepreneurship</p> <p>Dr. Tracy Williams Aspects of Entrepreneurship for a Second Chance</p>
2:30 p.m. – 3:00 p.m.	Presentation of Certificates / End of Program

Mathematics in Drug Discovery: Chemical Graph Theory Insights

Dr. Alex Alochukwu

Abstract:

The identification of appropriate compounds for drug design is a significant challenge that medical scientists face today. Selecting the optimal compounds is a complex task due to the infinite number of compounds available in natural and synthetic libraries; this makes the drug discovery process both time-consuming and costly. Graph theory, a branch of discrete mathematics, provides a natural framework for relating the molecular structures of compounds to their physical properties and biological activities. The intersection of mathematics and pharmacology enables ground-breaking advancements in drug discovery, particularly through the application of chemical graph theory. In this talk, we will provide an overview of how mathematical graph theory can be utilized to model and analyze molecular structures, identify potential drug candidates, and develop predictive models in drug design.

Bio:

Dr. Alex Alochukwu is an Assistant Professor of Mathematics in the Department of Mathematics, Computer Science, and Physics. He received his Ph.D. in Mathematics from the University of Johannesburg, as well as a Master's in Computer Science from the University of KwaZulu-Natal in South Africa and a Master's in Mathematical Science from Kwame Nkrumah University of Science and Technology (AIMS) in Ghana.

Dr. Alochukwu's research interests include graph theory, data analysis, combinatorics, discrete mathematics, optimization, and mathematical modeling, with an emphasis on solving practical problems in these fields. His current work focuses on utilizing graph-theoretical topological indices to advance drug design.

Dr. Alochukwu's scholarly contributions include numerous journal articles, a book chapter, and leadership on various honors projects. With a deep passion for the teaching and learning of mathematical sciences, Dr. Alochukwu brings extensive experience across all educational levels, nurturing a commitment to equipping the next generation of STEAM professionals. At ASU, he is dedicated to excellence in teaching, research, and mentorship, with a strong interest in interdisciplinary collaboration.

Social Determinants on Purchasing Behavior of Users Networking Sites

Anne Bassey, Abdul Aidoo, Ihuoma Ohamadike

Abstract:

Social commerce is a type of e-commerce that provides a new platform for marketing products and services through social networking sites (SNSs). Businesses have adopted SNSs as a platform to channel their products through various marketing and advertising tools to reach buyers. Social commerce has therefore become an influential tool to the young generation in their buying decisions. This study explores social determinants that influence the purchasing behavior of SNS users. The social determinants include: social support, seller uncertainty, socioeconomic status, social interaction, familiarity, ethnocentrism, personalization, and electronic word of mouth. The study employs qualitative research methods in the analysis of this study, by reviewing previous literature, peer-reviewed journal articles, books, and webpages to develop a trend, make an analysis, and draw a conclusion. The findings show significant relationships and a direct impact of social factors on the purchasing behavior of users of SNSs. The result is useful for academicians in future research and entrepreneurs to develop strategies for their business growth.

Keywords: social commerce; social networking sites; e-commerce; social factors; purchasing behavior.

Bio:

Anne Bassey is an accomplished Project Director for the E-5 Initiative at Albany State University. She brings extensive knowledge and experience in Public Administration and Criminal Justice to her role. She holds a master's in public administration and an M.S. in Criminal Justice, which equip her to lead campus initiatives focused on sexual assault and violence prevention. Mrs. Bassey is also an adjunct Instructor at Albany State University. Mrs. Bassey previously served as Project Coordinator for the SAMSHA-funded Project STOP, which addressed the prevention of HIV/AIDS, HPV, and HCV. Mrs. Bassey's expertise in the Violence Against Women Act (VAWA) and her deep understanding of the dynamics surrounding dating and domestic violence, stalking, and sexual assault are critical to her leadership of the Office on Violence against Women (OVW) campus grant Coordinated Community Response Team.

Ihuoma Ohamadike, DBH, MSW, is an Assistant Professor and Practicum Program Coordinator in the Department of Social Work at Albany State University. She is a licensed Master Social Worker (LMSW) in the State of Georgia and a member of the Georgia Nephrology Social Workers. Dr. Ohamadike received her Master of Social Work (MSW) from Albany State University in Georgia and her Doctor of Behavioral Health degree (DBH) from Arizona State University. Prior to joining the faculty at Albany State University, she worked as a renal social worker, providing supportive counseling and encouragement to Peritoneal /Home Hemo Dialysis (HT) and caregivers and educating patients on developing adaptive behaviors and perceptions needed to cope with End Stage Renal Disease (ESRD).

Dr. Aidoo completed his undergraduate degree in Economics from Kwame Nkrumah University of Science and Technology in Ghana. He furthered his education in General MBA from Istanbul Commerce University in Istanbul-Turkey. He pursued his Ph.D. in Innovation Management from the International University of Sarajevo in Bosnia & Herzegovina. Dr. Aidoo worked in the corporate industry before ending up in academia. He has solely and co-authored articles in internationally recognized journals, with SCOPUS indexed, such as Elsevier, Periodicals of Engineering and Natural Sciences, and Economic Management, entrepreneurship, Consumer Behavior, and Marketing. Dr. Aidoo is also fluent in the Turkish language.

Evaluation of a HBCU Master of Social Work Program: A Retrospective Examination of the First Ten Years

Jerry Daniel, Jamie Swain, Barbara Nowak, Ihouma Ohamadike, Jasmine Moore

Abstract:

While early social work education can trace its formal roots to the mid-19th Century, the first training courses began when the Association for the Improving Conditions of the Poor as well as the Charity Organization Societies implemented in-service training programs for their workers. While these efforts for preparing workers were helpful, some leaders believed more formal education was needed to effectively prepare their staff members. Influenced by Mary Richmond, an executive with the New York Charity Organization, this more formal educational approach began in 1898 at the New York School of Philanthropy. Subsequently, the New York School of Philanthropy became affiliated with Columbia University. Other university-affiliated social work programs followed, with the first program associated with a Historically Black College and University (HBCU) occurring in 1920 at Atlanta University (now Clark-Atlanta University).

Of the 340 Council on Social Work (CSWE) accredited Master of Social Work (MSW) programs in the United States, only 27 are located at HBCUs. This presentation describes and summarizes the conceptualization, development, implementation and evaluation of a Clinical MSW program at Albany State University (ASU) – located in Albany, Georgia. Using a retrospective logic model, program components, goals and outcomes are discussed. The evaluation component focuses on the outcomes of the first ten years of the program. Suggestions for future program changes are discussed.

Bio:

Jerry B. Daniel (JD, Ph.D., MPH, MSW, MS) is Chair and Professor of Social Work at Albany State University. He is a licensed clinical social worker, licensed attorney, certified school social worker and certified school counselor (all in Georgia). He has published in the areas of criminal justice, social work, law, and public health.

Jamie Swain is a licensed clinical social worker and received her MSW from Valdosta State University in Georgia. Currently, she is an Associate Professor and MSW Program Director in

the Department of Social Work at Albany State University. She is the project director for the Title IV-E and National Child Welfare Workforce Institute (NCWWI) grants. She is passionate about educating and strengthening social work professionals to meet the complex needs of families and vulnerable populations. Her interests include mental health and service provisions to assist children in successfully transitioning into adulthood.

Barbara J. Nowak, Ph.D., MSW is a former Associate Professor and Chair of the Department of Social Work at Albany State University. She is a licensed clinical social worker and has an extensive background in social work education and addiction treatment.

Ihouma Ohamadike, DBH, MSW is an Assistant Professor and Practicum Program Coordinator in the Department of Social Work at Albany State University. She is a licensed master social worker in the State of Georgia. Prior to joining the faculty at Albany State University, she worked as renal social worker.

Jasmine Moore, MPA is an administrative assistant with the Department of Criminal Justice and Department of Social Work at Albany State University. She received her MPA from Albany State University.

Taxonomic Problem Solved by Molecular Cytogenetics using Conventional and Advanced Karyotype Analysis

Shohana Huq

Abstract:

Cytogenetics is a branch of Biology excellent for solving any taxonomic problems in species. It is well-known that where the taxonomic parameters are insufficient to identify species, karyotype analysis often plays an important role in determining the taxonomic status of a taxa because karyotype is a very stable character and specific for each specimen. *Typhonium* plants have some economical and medicinal importance in tropical south, south-east and east Asia, Malay Archipelago to Australasia. This genus has thirty-seven species where some of the members look morphologically the same. *Typhonium trilobatum* (Coarse form) and its two morphological forms viz Tall form and Slender form were cytogenetically investigated. The centromeric formula of these three forms are $16m+2sm$ (Coarse form), $12m+6sm$ (Tall form) and $17m+2sm$ (Slender form). The Coarse form and the Tall form were found to possess $2n=18$ chromosomes whereas the Slender form has $2n=19$ chromosomes. The extra chromosome of the Slender form was a regular member of pair IX. In such a situation to solve the identity of these similar morphological forms, I used some modern methods like staining with fluorochromes (CMA and DAPI) and observation under fluorescence microscope. CMA binds with GC-rich repetitive sequences of the genome and gives characteristic yellow color bands. On the other hand, DAPI binds with AT-rich repetitive sequences fluorescing characteristic blue bands. With the help of fluorescent staining, it was possible to characterize different karyotypes of the similar taxa's. The overall karyotypic features indicated that the Tall form is quite different from the other two forms and thus may place in different taxonomic ranks. However, the Slender form may be considered as a trisomic variety of *T. trilobatum*.

Bio:

Dr. Huq is currently working as an Assistant professor of Biology at Albany State University. She has a long background in plant sciences and environmental issues particularly focusing on Plant Biotechnology and molecular biology. Her previous research work focused on Epigenetics of Chromatin Immunoprecipitation (ChIP) sequencing which was employed to

determine the interaction of genomic DNA and proteins in eukaryotic cells after any abiotic stress condition. Dr. Huq was able to develop a high-resolution profile on epigenetic modification and analyzed the gene expression patterns in *Panicum hallii* to explain the protein-DNA interactions genome-wide for the mentioned plant. She has the knowledge of several molecular techniques including ChIP sequencing data analysis, q-PCR, gene expression study, protein expression and proteomics study, DNA sequence analysis, genome database search and sequence deposition, basic Cistrome and motif analysis. Through her M.S in Molecular Cytogenetics she gained skill in Karyotype and FISH analysis of the Cell and had expertise in analyzing the chromosomes by different banding techniques like orcein, CMA and DAPI staining banding pattern. As a Research Scientist, Dr. Huq also worked on the development of *Agrobacterium* mediated transformation protocols and to evaluate the transcriptional networks involved in gene regulation of tomato plants. She had attended different conferences and presented posters in the scientific world. Her academic background is also equipped with teaching experiences in several Biological Sciences courses like Microbiology, principals of Biology, Human Genetics, Human anatomy and Physiology, environmental sciences, general biology, cell biology and many more.

The Effect of Elevated Hydrostatic Pressure, Caprylic Acid, Carvacrol, Citrospect, Citricidal and Lactic Acid for Inactivation of *Listeria monocytogenes* at 4 °C and 45 °C.

Md Niamul Kabir

Abstract:

Up to 99% of illnesses caused by *L. monocytogenes* stem from contaminated foods, and 94% of those infected require hospitalization. *L. monocytogenes* is responsible for 266 deaths annually in adults living in the US. This experiment investigates the effects of elevated hydrostatic pressure (150 to 450 MPa) at 4°C and 45°C for the decontamination effectiveness of *L. monocytogenes* in raw milk. Five different antimicrobials - caprylic acid, carvacrol, citrospect, citricidal and lactic acid were used in this study as synergism against *L. monocytogenes*. Treatments for varying pressures were conducted at 0, 3, and 5 minutes. Treatments conducted at less than 400 MPa were less effective at decontamination of *L. monocytogenes*. Generally, the longer the sample was exposed to elevated hydrostatic pressure, the more effective the decontamination effort was. Based on the data collected, the most effective antibiotic for the decontamination of *L. monocytogenes* was caprylic acid. The minimum pressure needed with the addition of caprylic acid to effectively decontaminate *L. monocytogenes* is approximately 300-400 MPa. Based on the data collected there was no significant evidence that the temperatures tested were a significant factor in the decontamination of *L. monocytogenes*. The results of this experiment could be important to mitigate the burden of listeriosis.

Bio:

Dr. Md Niamul Kabir is an Assistant Professor of Biology with over 10 years of experience in teaching and 12 years of experience training students in research. Dr. Kabir is teaching several undergraduate introduction and senior level courses such as Microbiology and Applications, Introduction of Microbiology, Cell and Molecular Biology, General Botany, Fundamentals of Biotechnology, Genetic Engineering, Human Anatomy and Physiology I&II, Introduction to Biological Sciences I &II, and Principles of Biology I &II. He advised several ASU students into their Senior research in food microbiology and plant microbial pathology-based research. Dr. Kabir's academic background is equipped with 12 years of research experiences in food microbiology, plant pathology-based microbiology, molecular microbiology, plant biotechnology, plant tissue culture, agricultural science, and molecular biology.

with an emphasis on molecular characterization of plant pathogens and transgenic plants. As a postdoctoral researcher, I assisted and supervised 7 graduate students (5 Ph.D. and 2 master's students) in the public health food microBio: logy lab. Also Dr. Kabir trained more than seven masters and 10 undergraduate students in molecular Bio: logy and plant pathology techniques during my doctoral and master's program.

Dr. Kabir has extensive scientific knowledge and research expertise to microbial food safety in human health evaluating in processing microbial food safety and conducting validation studies for liquid and solid foods with the high-pressure processing (HPP, from PBI HUB880 Explorer) using various serogroups of O157 and non-O157 Shiga toxin-producing *Escherichia coli* and public health significant serovars of *Listeria monocytogenes*, *Salmonella*, *Staphylococcus aureus*, and endospore forming *Bacillus*. It is worth mentioning that Dr. Kabir's work on food microBio: logy which is uses High Pressure Processing (HPP, from PBI HUB880 Explorer) for food safety microBio: logy in the USA and he possesses excellent and unique expertise on this technology. Dr. Kabir has received - FSPCA Lead Instructor certification for human food, developing and implementing HACCP certification and FSPCA preventive controls for human food, certificate of training (PCQI). Dr. Kabir is having certification of training on Data Science and Machine Learning: Making Data-Driven Decisions program by MIT Institute for Data, Systems, and Society (IDSS). Dr. Kabir is also serving as a PI of NSF funded Research Initiation Award project which is focusing on developing a food safety and food microbiology research laboratory in Albany State University.

Post Secondary Options and Considerations with Adolescents with Autistic Spectrum Disorder

Jennifer Jenkins

Abstract:

Autism Spectrum Disorders (ASD) are neurodevelopmental disorders characterized by impairments in communication, social reciprocity and repetitive-restricted interests and behaviors (American Psychiatric Association [APA] 2013). As of the surveillance year 2020, which collects data from the Autism and Developmental Disabilities Monitoring (ADDM) network about 1 in 36 children has been identified with Autism (CDC, 2024). With this increase in numbers, it is easy to project that the number of adolescents and young adults with autism who would like to be college-bound or join the workforce is also rising. Students with ASD are in need of post-secondary options and support to further their career goals and promote long-term independence (Briel & Getzel, 2014). Therefore, counselors whether school, clinical mental health or even vocational rehabilitation counselors need to have specific knowledge on how to assist this growing population in their future planning.

Bio:

Jennifer Jenkins, PhD, LPC, NCC, RPT, BC-TMH, GA School Counselor, received her PhD in Counselor Education from Capella University and has an MAEd in Counselor Education from Virginia Tech. Dr. Jenkins began her counseling career as a licensed school counselor in Virginia public schools and transitioned to a school counseling position in a private school in Tennessee. Next, Dr. Jenkins moved into the clinical mental health side of counseling, working as an intensive in-home counselor and eventually joining a private practice in Warner Robins, GA. Currently, Dr. Jenkins is the owner/ therapist for Hope & Grace Mental Health Counseling, a private practice in Columbus, GA where she sees clients across the lifespan and specializes in play therapy and autism spectrum disorders. Dr. Jenkins is an Assistant Professor in the graduate school for Counselor Education at Albany State University.

Does Environment Matter for Healthy Eating in Geriatric Rural Communities

Anta'Sha M. Jones

Abstract:

Background: Aging is an inevitable process one will experience in their lifetime (Harris, 1999). The growing pace of the aging population is much faster than in the past due to advances in medicine and technology (Harris, 1999). People worldwide are living longer. Every country in the world is experiencing a growth in the size and proportion of older persons identified as “elderly,” also known as the geriatric community (World Health Organization, 2022). In the United States of America, rural environments are experiencing a rapid increase in the number of older adults compared to urban areas.

It has been determined that as elderly individuals age, challenges exist with their health due to the aging process that affects their lifespan (Harris, 1999). Evidence suggests that maintaining good health involves constantly providing a supportive and physical environment (World Health Organization, 2022). However, physical and social environments that lack support can affect health—creating barriers that connect to adverse decisions and changes in health behaviors that can be determinantal to health.

Methods: This qualitative research project will examine and identify the relationship between food choices and the social environment of elderly individuals in a rural Georgia community. The project will analyze group interviews and surveys through a phenomenological approach to determine if there is an impact on food choice decisions.

Anticipated Results: The findings from this research will determine if there is a direct impact regarding the social environment and food choice decisions, which would provide evidence that the social environment could be vital in health for the elderly community living in rural areas.

Conclusion: The implementations from this research will create awareness and provide recommendations for implementing successful public health educational geriatrics projects to ensure that the proper support is available in their environment to address their health needs and promote healthy aging.

Bio:

Dr. Anta'Sha Jones is an Assistant Biology Professor in the Natural Science Department at Albany State University (ASU) in Albany, Georgia. As a STEM (Science, Technology,

Engineering, and Mathematics) Educator, she has over 17 years of experience inspiring the next generation to consider STEM careers and opportunities. Dr. Jones uses innovative teaching methods that impart knowledge to ASU scholars through an interdisciplinary approach that integrates research through real-world applications, preparing students for careers and graduate programs. Dr. Jones' passion goes beyond the classroom, providing valuable STEM experiences and opportunities through educational STEM grants that foster student engagement and promote diversity in science.

Dr. Jones holds a Bachelor of Science and a Master of Science in Biology from Tuskegee University and a Ph.D. in Public Health with a concentration in Epidemiology from Walden University. She has published articles that consider the importance of understanding diversity in STEM and delivering insights on developing strategies that could eliminate academic barriers for BIPOC students of all ages. Dr. Jones has presented numerous talks on countless STEM education-related topics, ranging from effective strategies to improve student STEM success and engagement to recognizing and understanding the effects of imposter syndrome in STEM. She is a STEM educator liaison at ASU. She shares her insights on effective teaching strategies and the importance of interdisciplinary collaborations encouraging students' interest and contributions to STEM.

In addition to her STEM education research and teaching, Dr. Jones is a Brown University Scholar in Residence. At Brown University, she investigated “STEM Education: Impostor Syndrome Creating Awareness and Identifying Solutions to Increase BIPOC Students in STEM.” At ASU, she serves as a University College (UC) Faculty Member for the STEM Experience Learning Community, an International ASU Faculty Fellow, a Co-Director of the Summer Health Science and STEM Academy, the Co-Chair of the Dougherty County Tobacco Coalition, and a Girl Scout Brownie Volunteer.

Understanding Pain Management in Hospice, For the Family

Floyd Nelson

Abstract:

Effective pain management is crucial in hospice care, as it enhances the comfort and quality of life for patients approaching the end-of-life stage and eases emotional burdens for their families. This study delves into the complex challenges and strategies associated with pain control in hospice settings, explicitly recognizing the pivotal roles of healthcare professionals and family caregivers. Existing literature highlights the pivotal role of palliative interventions, encompassing medication management and supportive therapies, in improving patient comfort and overall well-being. Nevertheless, gaps persist in understanding family caregivers' unique challenges in home hospice environments. By addressing these barriers and interventions, this research provides valuable insights for optimizing pain management practices and enhancing end-of-life care outcomes, thereby offering hope for improved care. Integrating patient and family perspectives through qualitative research methods promises to enhance understanding and support the development of individualized care plans that prioritize specific needs, ultimately improving the overall quality of care in hospice settings.

Bio:

Floyd Nelson is a dedicated nursing professional with a robust educational background and extensive experience across various healthcare settings. An alumnus of Albany State University, Floyd's nursing journey began with his enrollment in a Licensed Practical Nurse (LPN) to Associate of Science in Nursing (ASN) program. He subsequently advanced his education by completing a Bachelor of Science in Nursing (BSN), and is currently furthering his expertise by pursuing a Master of Science in Nursing (MSN) to become a Family Nurse Practitioner.

Floyd's commitment to healthcare started in the military, where he served as a Hospital Corpsman in the United States Navy. This experience laid the foundation for a career in nursing, transitioning him into the civilian healthcare sector, where he became a Licensed Vocational Nurse (LVN) in California. During his time in California, Floyd demonstrated adaptability by working in diverse roles as a long-term care nurse, hospice nurse, and clinic nurse for an ear doctor, gaining invaluable skills and insights into patient care.

In 2017, Floyd relocated to Georgia and resumed his academic pursuits in January 2018 at Gwinnett Technical College. Throughout his education, he balanced his studies with full-time work as a Pediatric Home Health Nurse, providing critical care to children in a home setting. His hard work culminated in earning his RN (Registered Nurse) designation, after which he entered a residency program at Northeast Georgia Medical Center, specializing in critical care.

Currently, Floyd has transitioned back to hospice care, a field he is deeply passionate about. He serves as an Admissions and Post-Admission Educational Nurse with Hospice of NGHS, the second-largest hospice organization in Georgia. In this role, he plays a crucial part in the admissions process and ensures that post-admission patients and their families receive comprehensive education about their care.

Floyd Nelson's career reflects a deep commitment to nursing and patient advocacy, underpinned by a continuous pursuit of education and professional development. His diverse experiences across various nursing specialties highlight his adaptability and, most importantly, his unwavering dedication to providing high-quality healthcare and advocating for his patients.

Linking Asset's Risk to Asset's Return from a Risk-Free Asset, and to Other Market Characteristics

Amaechi Nwaokoro

Abstract:

Having economic markets' foresight is the first step toward a shift from poverty, and toward the accumulation of wealth. Markets provide arenas for individuals to exercise their competitive, comparative, and speculative advantages to achieve the most returns from their market activities. Most Americans are aware of the labor (job) market where the participants earn the most aggregated incomes. Most Americans are yet to comprehend and to participate in the activities of the financial market. Particularly, African Americans do not seem to have enough information for participating in the activities of the financial market. This is the market where interest incomes can be earned to augment the labor market incomes earned by hard work. This investigative study encourages the small financial investors and the would-be-financial entrepreneurs to be aware of the features of the financial market and of the relationship between the returns on the most referenced bonds—AAA corporate bonds and the Treasury Bonds. How much asset's default risk is acceptable is most likely to be explained by the asset's return from a risk-free environment. Asset's liquidity, inflation rate, and wage rate are considered as shifters of the equilibrium of the asset's return. These are criteria for forming viable and profitable investment portfolios.

Key words: Market foresight; financial market; small financial investors; would-be-financial entrepreneurs; AAA bonds, Treasury bills, default risks, asset liquidity

Bio:

My name is Dr. Amaechi N. Nwaokoro, a professor of economics in the School of Business at Albany State University. I believe in academic excellence of teaching and learning, and empirical research. I am glad that I chose Albany State University's resourceful campus that provided me an opportunity to enjoy an academic career. There no gain saying that this opportunity has enabled me to have over seventeen years of continuous teaching and research experience that are applied at both undergraduate and graduate levels of economic education. My research areas are economic inequality and inequity, poverty, health disparity, and activities of

labor and financial markets. I have several publications and proceeding in peer reviewed journal outlets and have mentored several students through the ASU Center of Undergraduate Research. I can be reached at 229-430-4723 or e-mail: Amaechi.nwaokoro@asurams.edu

Implementation of a STI Risk Behavior Reduction Program for University Students Summer Odom

Abstract:

To implement a Sexually Transmitted Infection risk behavior reduction program to reduce sexual risk behaviors in university-aged students. Participants: Fifty-nine freshman from the university participated in the STI Risk Behavior Reduction program. Methods Pre- and post-test design using descriptive statistics evaluated the STI Risk Behavior Reduction Program. Results: The majority of participants were 19 years of age, female, and freshman. Condom use as a pregnancy prevention increased from 18 (before intervention) to 23 participants (after intervention). Retrospective data noted 72 referrals the year before implementation whereas, 148 referrals were made after implementation. Conclusions: An increase in referrals to community centers and condom usage was noted after the STI Risk Behavior Reduction Program. An increased referral rate may have been due to the increase in knowledge of risky sexual behaviors and when seeking treatment early by recognizing the signs of sexual transmitted infections.

Bio:

I am Dr. Summer Odom DNP, FNP-C, RN, CE. Permit me to share myself with you. I currently live in Albany, GA with my daughter who is 18 and my puppy dog named Atticus. When I am not busy attending to my nursing duties, my family and I love to spend time together by viewing films, traveling to the mountains, and/or taking day trips to major cities close to our home. My daughter is an avid sports participant (track and basketball) which keeps us busy as well.

My nursing journey began with a passion to become a nurse after my daughter was born. I was a single mom who needed both the flexibility and the security of the nursing profession. To my surprise, nursing would become my greatest passion in life. I accomplished my undergraduate Bachelors of Nursing degree from Georgia Southwestern State University. Then, perused a Masters of Nursing degree with a concentration in Family Nurse Practitioner from Albany State University. Finally, I obtained a Doctor of Nursing Practice degree with a concentration in the Graduate Certificate in Nursing Education Program. When I first became a nurse, my passion was for critical care. I served patients for nine years in the surgical, cardiac, and medical intensive care units. Experiencing the advanced level of care in the units, my

interest in nursing shifted to the desire of becoming an advanced provider. At that time, I became a Family Nursing Practitioner. Then, I began to serve college students with this degree. I loved teaching the students so deeply that my interest again shifted to nursing education.

I was blessed to start my teaching experience in an undergraduate BSN program with my FNP degree. I started with a health assessment course. I knew teaching was my passion from then on. I was able to advance into teaching graduate level nursing courses once I obtained my DNP degree and fell in love with the online environment and the diverse array of students in the courses. The challenge to serve deeper into the profession and achieve additional knowledge in my nursing career has always driven me. I am grateful for the opportunity to serve in education. I am excited to get to know each of you further and to expand our learning together.

Dr. Summer Odom

The Design of a Wearable Automated Insulin Delivery System (WAIDS)

Robert Owor & Noella Mwangoka

Abstract:

A wearable automated insulin delivery system (WAIDS) that integrates continuous glucose monitoring (CGM) with automated insulin injection will significantly stabilize glucose levels in hyperglycemic patients compared to standard insulin delivery methods, leading to improved glycemic control and reduced incidence of hyperglycemic episodes. Diabetes is a chronic disease state affecting 38.4 million people, 29.7 million people who are diagnosed leaving 8.7 million people undiagnosed total cost associated with diagnosed diabetes was \$412.9 billion in 2022, leading to urgent need for innovative management solutions. This research proposes a novel wearable insulin delivery that integrates continuous glucose monitoring with automated insulin injection. We hypothesize that the wearable insulin delivery system that integrates continuous glucose monitoring with automated insulin injection will significantly stabilize glucose levels in hyperglycemic patients compared to standard insulin delivery methods. The device is designed to be worn on the upper arm for ease of use and to minimize interference with daily activities. Uncontrolled glycemic control will lead to many serious life-threatening complications such as eye, kidney, nerves, heart, and peripheral vascular system. It is vital to manage hyperglycemia effectively and efficiently to prevent complications of the disease and to improve the patient outcomes. Our findings could potential provide a seamless, integrated solution for diabetes management, combining the best of current technology with user-centered design.

Bio:

Dr. Robert Steven Owor is an experienced academic leader and researcher with over 20 years of experience, currently serving as the Executive Director of the Center for Innovation and Emerging Technologies at Albany State University. He holds a Ph.D. in Computer Science & Software Engineering from Auburn University, an M.S. in Computer Science from Acadia University, and a B.S. in Statistics and Applied Economics from Makerere University.

Dr. Owor has held various academic and administrative roles, including Professor and Chair of the Department of Mathematics and Computer Science. His research and leadership have led him to secure numerous grants, such as the \$65 million Georgia AIMS Project and

significant funding from NASA, USDA, and Booz Allen Hamilton. His expertise spans areas like artificial intelligence, blockchain, cybersecurity, quantum computing, and smart agriculture. Additionally, he has been an IBM Champion for multiple years, contributing to fields like DevOps, cloud computing, and blockchain.

Dr. Owor has published extensively on topics like network security, quantum cryptography, and blockchain, and has mentored numerous students in advanced technology projects. He is also deeply engaged in community and professional service, judging competitions, reviewing academic papers, and supporting STEM education initiatives. His technical proficiencies include software development, blockchain, cloud services, and data analytics.

Noella Mwangoka is a clinical pharmacist currently pursuing an MBA, with a strong interest in the pharmaceutical industry and a focus on bringing the best outcomes for patients' needs. Noella is currently working on research to develop a device that can help regulate blood sugar in diabetes. Previously, Noella worked as a Research Analyst in polymeric science in research and development, specializing in the study of structures and chemical properties of natural and synthetic or composite materials. Noella enjoys spending time with family and friends and singing at church.

Controlling Electrical Property of Material

Arun Saha

Abstract:

Electrical property of any dielectric material is called dielectric constant which controls the speed of electromagnetic wave in that material. Properly controlled or manipulated electromagnetic wave is the key to many devices and instruments such as antennas, radars, filters etc. widely used in telecommunication and defense industries/organizations. Dielectric constant of a material is a natural property and is evolved from atomic and/or molecular configuration of that material. Researchers and scientists have been able to control dielectric constant through costly and time-consuming chemical processing by mixing two or more material together. To overcome this drawback, a technique to control dielectric property without chemical processing has been elucidated in this presentation. In this project, circular metal patches were printed periodically on a host material to control overall dielectric constant of that material. Experimental results showed that the denser the metal patches, the bigger the overall dielectric constant of that material.

Bio:

Dr. Arun K Saha is a professor of Physics & pre-engineering in the department of Math, Computer Science & Physics at Albany State University. His research area is the characterization of artificial material or metamaterial with extraordinary properties that do not exist in nature. Dr. Saha secured external funding from National Science Foundation, NASA and Department of Defense to conduct his research. Dr. Saha published numerous peer-reviewed articles and conference proceedings coauthored by ASU undergraduate students. Currently Dr. Saha is involved in designing a special material that will block a particular radio frequency signal to protect sensitive electronic devices or human body from harmful radiation. Dr. Saha's another research thrust is the estimation of moisture content of agricultural product using artificial intelligence technique.

The Importance of Repairing a Broken Education Reform: Should Eliminating Every Student Succeeds Act (ESSA)/Race to the Top (RT3) in the New Presidential Administration be the Solution?

Jennifer Snelling

Abstract:

From the time the No Child Left Behind (NCLB) Act was passed in 2002 as a bipartisan educational reform under the Bush Administration and replaced with the Every Student Succeeds Act (ESSA) in 2015 under the Obama Administration, there have been many concerns about the possible misalignment of the enforcement of that reform with the origination of what that reform was set out to do. Instead of effectively measuring whether this initiative would help schools close the achievement gap, it resulted in a widening of the gap. This achievement gap was measured through high-stakes state standardized testing towards the end of the school term. For example, with Georgia grade school students taking the Georgia Milestones End of Grade exams, there are “benchmark grades” set in which all parts of the exam have to be passed in order to be promoted to the next grade (3rd Grade, 5th Grade, and 8th Grade). Furthermore, there has been less emphasis on involuntary parental involvement as well as developing recommended strategies that are effective from closing the achievement gaps, even resolving the “loss of learning” posed during the COVID-19 pandemic during the 2019-2020 and 2020-2021 school years. The emphases were mainly in reading and math. So, with the information provided, the question remains: Should this particular reform be eliminated in the new presidential administration?

Bio:

Dr. Jennifer Snelling is a part-time instructor of Psychology with the Department of Social Sciences at Albany State University. She has taught here for almost two years, teaching General Psychology and Human Growth and Development. She previously taught at the K-12 education level for four years, in which the subjects of emphasis were social studies and english-language arts. She holds a Bachelor of Science degree in Management from Albany State University (in which she is a 2006 graduate); a Master of Science degree in Management (Human Resource Management concentration) from Troy University; a Graduate Certificate in Project Management from Keller Graduate School of Management; a Post-Master’s Certificate

in Public Administration from Northcentral University, and a PhD in Industrial-Organizational Psychology from Adler University. For her dissertation, she wrote on the title: “Disruptive Innovation in the Secondary Classroom toward Student College and/or Career Goals”. Her extensive professional and educational experience surrounding K-12 and higher education led to the reason that she is presenting the topic: “The Importance of Repairing a Broken Education Reform: Should Eliminating Every Student Succeeds Act (ESSA)/Race to the Top (RT3) in the New Presidential Administration be the Solution?”

Spatio-temporal Crime Forecasting

Nadeepa Wickramage

Abstract:

This research explores a novel approach to spatio-temporal crime forecasting by developing a continuous-time crime model that addresses the limitations of traditional discrete-time methods. Our research leverages advanced operations research techniques to capture the dynamic nature of criminal activities across both space and time. The proposed model incorporates various socio-economic, demographic, and environmental factors to predict crime occurrences with improved accuracy and granularity.

We employ a combination of point process modeling and Bayesian inference to account for the complex interactions between different crime types and their spatial dependencies. The continuous-time framework allows for more precise predictions and better handling of irregular time intervals between events. Our model is validated using real-world crime data from local municipalities.

This research has important implications for law enforcement agencies, enabling more efficient resource allocation and proactive crime prevention strategies. Furthermore, the methodology presented in this paper can be extended to other domains requiring spatio-temporal event forecasting.

Bio:

Dr. Nadeepa Wickramage is an Assistant Professor in Supply Chain and Logistics Management at Albany State University, where he teaches quantitative analysis and supply chain management courses, including Management Science, Project Management, Warehouse Management, and Logistics Information Systems.

Dr. Wickramage earned his PhD in Industrial Engineering from Clemson University, SC and BSc. Engineering (Hons) from University of Moratuwa. His research interests mainly focus on effective teaching methods and Logistics and Supply Chain Management. More specifically, using transparency in teaching for effective teaching, using artificial intelligence assisted teaching, time-based operations in facilities, warehouse routing and design, intermodal transportation networks, and humanitarian logistics. In addition, he is also interested in process optimization. He utilizes analytical models using techniques such as mixed integer programming, simulation, queuing theory and applied probability.

Writing Effective Research Abstracts

Dr. Nneka Nora Osakwe

Abstract:

The Abstract is an important front-matter of any scholarly work or project, including research articles, proposals, reports, dissertations, and workshop presentations, to mention a few. When an abstract fails to communicate the intentions of a scholarly work, its aim is defeated and the result could be rejection of proposal and non-acceptance of submitted paper for publication. In both graduate and undergraduate research, understanding the aim of an abstract and the discourse structure are key steps in writing a successful research report. Considering the critical role of abstracts, this presentation discusses the communicative purpose of an abstract and the process of writing successful abstracts through discourse analysis.

Bio:

Dr. Nneka Nora Osakwe is a Professor of English, the Executive Director for the Center of Transformational Student Experiences (CTSE) at Albany State University (ASU), Georgia. In her current roles, she oversees undergraduate research, global learning via faculty curriculum internationalization, student mentoring for academic excellence, and international internships and fellowships, like Fulbright. She served as the Director for International Education at ASU for over 10 years. Dr. Osakwe has been teaching in higher education for over thirty years and at ASU, she has been a graduate faculty since 2006. She was the former Chair of the Graduate Faculty Research Colloquium. Her teaching and research specialties include rhetoric and composition, technical writing, discourse analysis, reading and writing pedagogy, communication skills, international education, teacher education, human/children's rights and ethnography-slave narratives. She has presented numerous papers in various national and international conferences, and has authored several articles, and book-chapters. She is editor/co-editor of some books, and presently serves on the editorial board of International Research and Review (IRR), Journal of Phi Beta Delta, Honor Society for International Scholars. She led the publication of two Special Issues on Internationalizing the Curriculum with 14 articles by ASU Faculty members (IRR Journal Vol. 11 No. 2, Spring/Summer 2022 and Vol. 6. No. 2 Spring 2017). She is the Founder and Chief Editor of ASU Global Issues. Dr. Osakwe is named a USG

Leadership Fellow-2021, and she is the recipient of the 2022 NAFSA Region VII Award for Diversity, Equity, and Inclusion in International Education.

The Dark Side of Entrepreneurship

Devi Akella

Abstract:

Entrepreneurship despite its best intentions, and emancipatory potential possesses a dark side. To allow a holistic portrayal of entrepreneurship it is necessary to expose its destructive and hidden side. This paper seeks to explore, deconstruct, and expose the negativity embedded within the entrepreneurship phenomenon to ensure it remains steadfast and does not deviate from its emancipatory intents. The paper integrates a critical realism paradigm and dialectic phenomenology to consider nineteen qualitative interviews undertaken with entrepreneurs in the southeast region of USA and the Palestinian region located in the Middle East. The three domains of CR construct: empirical, actual, and real effectively provide insights about the positive and negative aspects of entrepreneurship and the plausible reasons behind these factors.

Bio:

Dr. Devi Akella is the Chair and a professor of management at the School of Business, Albany State University, GA where she teaches Organizational Behavior and Human Resources Management at the undergraduate and graduate levels. She completed her PhD in Organizational Behavior and MBA from the University of Leeds, UK. She is also a Senior Certified Professional (SCP) with the Society of Human Resources Management (SHRM). Dr. Akella is a proficient researcher in the area of critical management studies and has published numerous journal papers, books, and presented papers at national and international conferences.

Aspects of Entrepreneurship for a Second Chance

Dr. Tracy Williams

Abstract:

This presentation is aimed at exploring factors for success, guiding participant-learners in an entrepreneurial program designed to leap barriers to realize breakthroughs. Entrepreneurship can serve as a viable employment path for those with limited potential following traditional career lanes for myriad of reasons, including challenged backgrounds—formerly incarcerated, chronically under-employed, and/or ageism – moving from barriers to breakthroughs. There are common strategies, theories, and models that are apt to serve each of the categories mentioned to assist in navigating to success for under-supported groups. Entrepreneurial Subject Matter Experts (eSMEs) are those who are very successful in a niche market or widely regarded as accomplished professional entrepreneurs, as economic agents, uniquely posited to provide practical, tactical, strategic, operational, motivational, and social support to others in entrepreneurial projects. These esteemed entrepreneurs can leverage agency to offer timely, informative, intuitive, and impactful information in a compressed timeframe to overcome challenges and gaps in knowledge, experience, efficacy, forecasting, or necessary attributes for emerging entrepreneurs to engage talent and spotlight services that are untapped or under-serviced while offering mentorship, advisement, and coaching to leap barriers on the path to entrepreneurship. New entrepreneurs with challenged backgrounds can benefit significantly from eSMEs to chart a new path to realize breakthroughs. This presentation will introduce the Heideggerian theoretical framework, to examine experiences of stakeholders to offer contextual interpretations of experiences. No previous research has illustrated the utility of eSME impact on emerging entrepreneurs, including those with challenging backgrounds.

Keywords: Kram's theory, hermeneutics, social learning theory, mentor-mentorship, individual entrepreneurial orientation, entrepreneurial intention, motivation, proximity, agency, eSME

Bio:

Dr. Tracy Williams teaches management courses at the undergraduate and graduate level here at ASU in the School of Business over the past ten years. She has been a facilitator with the Albany Second Chance Program for more than ten years, delivering employability workshops and most recently an inaugural entrepreneurial workshop. Her experiences are focused on HR, organizational behavior, career development, and social learning theories. She holds a SHRM-SCP and a bevy of complimentary psychometric assessments. Dr. Williams has worked across industries and higher education in employee, workforce, and economic development, leadership, team building, human resources, and strategic planning while serving in senior-level roles. She is a qualitative researcher.

Presenters

Department of Mathematics, Computer Science, and Physics

Dr. Alex Alochukwu

Robert Owor

Noella Mwangoka

Department of Natural Sciences

Md Niamul Kabir

Anta'Sha M. Jones

Arun Saha

Shohana Huq

Department of Nursing

Summer Odom

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Jennifer Jenkins

Amaechi Nwaokoro

Nadeepa Wickramage

Dr. Nneka Nora Osakwe

Devi Akella

Dr. Tracy Williams

Department of Social Sciences

Jennifer Snelling

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Floyd Nelson

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