

# OFFICE OF TRANSFORMATIONAL STUDENT EXPERIENCES (OTSE) ACADEMIC-AFFAIRS

#### UNDERGRADUATE RESEARCH WORKSHOPS

### **Research-Faculty Presenters & Biodata**



Dr. Patrick Whitehead is associate professor of psychology, adjunct professor of graduate education, and coordinator of general education at Albany State University. He has published seven books and three dozen articles and book chapters in psychology, philosophy, and education. He is on the editorial board of

international research journals and is a reviewer of scholarly books for many prominent academic publishers (including SAGE, Routledge, Palgrave McMillan, Springer, Rowman & Littlefield, and Cambridge University Press.)

# Research-Workshop Titles and Abstracts

## Title: An Introduction to Qualitative Research'

**Abstract:** Qualitative research represents a humanistic approach to research, and it complements the experimental approach more common in the natural sciences. While experimental researchers ask "why" something happens, qualitative researchers ask, "what was it like?" Dr. Whitehead describes some of his own work using qualitative research in health psychology, sports psychology, and educational psychology, and he provides guidance for researchers who might be interested in designing their own qualitative studies. Topics include formulating a research question, obtaining IRB approval, interviewing, transcribing and analyzing data, and presenting your findings.

### Date and Link to join

#### February 6, 2024 4:00PM

WebEx Meeting link: https://rb.gy/l0lufr

#### Research-Faculty Presenters & Biodata



**Dr. Arun Saha** is a Professor of Physics and Pre-engineering in the department of Math, Computer Science and Physics at Albany State University. Dr. Saha earned Ph.D in Electrical & Electronic Engineering from Yamaguchi University, Japan in 2002. After having some industry and Post-Doctoral experience, Dr. Saha joined ASU in fall 2008. Dr. Saha's research interest

includes microwave filtering, wireless power transfer, material characterization and solar energy. Recently, Dr. Saha extends his research in the area of metamaterial that interacts with microwave signal in unprecedented manner resulting in innovative design of microwave devices with extraordinary functionality. Dr. Saha secured funding from several agencies such as DoD, NASA, NSF and published 26 peer reviewed articles of which many of those are coauthored by ASU students.

# **Title: Science Research Process and Data Collection**

Abstract: Scientific Research is the aggregation of several sequential process such as noticeable observation, developing hypothesis, predictions based on hypothesis and design of experiment to test hypothesis. Data collection is the last portion of this process. In this presentation, some light will be focused on types of data, data collection techniques and strategies, a way to check validity of collected data and lastly data interpretation. Responsible conduct of research and data management issue will also be discussed.

#### **February 8, 2024**

#### 12:00PM

WebEx Meeting link:

https://rb.gy/l0lufr



**Dr. Zephyrinus C. Okonkwo** is a Professor of Mathematics at Albany State University, Albany, Georgia. He earned the B.S. degree in Mathematics/Education (First Class Honors) and the Master of Philosophy in Engineering Analysis (M.Phil.) from University of Lagos, Nigeria. He subsequently earned his Ph.D. in Mathematics in 1994 at the University of

# Title: Research Questions, Hypothesis, Methodology, and Result

The first step in a research study is the selection of a research topic based on interest, previous knowledge, and expected outcome. Once a topic or title is selected, the next issue is to pose research

### February 13, 2024

#### 4:00PM

WebEx Meeting link:

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Texas-Arlington. The title of his Ph.D. dissertation is, Control Problems in the Class of Linear Quadratic Systems. Dr. Okonkwo has published more than forty-two scholarly papers and has presented more than seventy papers at scholarly meetings and conferences. He has also presented numerous workshops and training sessions for K-12 students, school teachers, and university teachers. He has worked closely with local county school system to enhance teacher quality in content and pedagogy.

questions. Research questions are those questions the research will answer. Hypotheses are those assumptions or predictions the research study will authenticate. These are tentative answers in the sense that the hypotheses could be wrong. At the core of a research study is the Methodology. Methodology provides authentic and scientific pathway for the study. It enables the researcher a systematics research way for which research results are realized. Essentially, the methodology provides the design of study, states whether the research is quantitative or qualitative, delineates methods of data collection, and the tools needed to analyze the data subsequently authenticate the hypotheses and answer the research questions. The Result section of the study describes the findings which are obtained as a result of the study. These results are usually obtained from the analysis of the data associated with the study.

In this presentation, we will discuss the research questions, hypothesis, methodology, and results with examples for illustration.

### Research-Faculty Presenters & Biodata



Dr. Melanie Hatch currently serves as the Dean of the College of Arts and at Albany State University. She has 15 years at institutions such as Gannon University, Marymount University and Penn State University. Prior to becoming an administrator, she was a fulltime faculty member in the school of business, education and medicine. engineering at Miami University and in the school of business at Middle Tennessee State University.

She started her career as an Operations

Research Analyst with the Air Force where she conducted survivability and vulnerability assessments of combat aircraft. She also created sustainability plans for combat units deployed during wartime. She then became the Training Manager for Dynamics Research Corporation which fostered her interest in teaching.

She earned her doctorate from Virginia Polytechnic Institute, her master's degree from the University of Dayton and her bachelor's degree from Indiana University.

### **Title: Research with Case Studies**

A case study takes an in-depth look at a subject, Sciences, and Professor of Mathematics which can be an individual person, a community, 4:00PM an event or even a decision. It is a research been an academic administrator for over strategy which can involve different types of data collection processes to determine if there are patterns of behavior or to explore potential causes of behavior. Case studies are used in many different disciplines such as psychology,

February 20, 2024

WebEx Meeting link: https://rb.gy/l0lufr



Dr. Anta'Sha Jones is an Assistant Professor of Biology in the Natural Science Department. She has served at the Albany State University for over 17 years. For the past 5 years, she has shown a passion for imparting knowledge to ASU's scholars that goes above and beyond the call of duty for all her students. Dr. Jones provides valuable experiences and opportunities for her students by working on various

grants that will benefit them once they leave her classroom, preparing them for the workforce and continuing their education. Dr. Jones has over 20 years of educational experience inspiring young people to consider Science, Technology, Engineering, and Mathematics (STEM) careers and opportunities. Dr. Jones has had the chance to inspire students by actively participating in not only academic and professional activities but also in mentoring underrepresented students, implementing science aims in research programs and curriculums, incorporating effective strategies for STEM success, implementing aims and goals from STEM planning, encouraging retention, providing academic support, encouraging student's interest and engagement, career exploration opportunities and challenges, incorporating strategies and participating in hands-on STEM activities.

#### Title: Methods in Research.

Communicating with the scientific community about data is vital for the existence of an active scientist in the field of research. Therefore, it is essential to understand how to conduct methods effectively in research for science and other disciplines. In this workshop, we will discuss the importance of research methods and how to communicate your methods to peers in academics. The session will hone in on identifying scholarly methods used to validate research that provides insight into answering research questions. After the session, students will walk away understanding methods and determining the best method for their research project.

### February 22, 2024

#### 4:00PM

WebEx Meeting link:

https://rb.gy/l0lufr



Dr. Vijay J. Kunwar is an Associate Professor and Coordinator of Mathematics program at Albany State University. He has earned a Ph.D. in Mathematics from Florida State University and M.S. in Analytics from Georgia Institute of Technology. Dr. Kunwar's areas of expertise lie in Applied and Computational Mathematics, Machine Learning, Programming, and Analytics. For the last

# Title: Undergraduate Research in the Era of Artificial Intelligence (AI)

Infusion of Artificial Intelligence (AI) has become inevitable in all aspects of human life as it has been revolutionizing the process and procedure of tasks done by humans and machines. AI plays a significant role in research across various disciplines. It presents exciting opportunities for both students and

### February 27, 2024

#### 4:00PM

WebEx Meeting link: <a href="https://rb.gy/l0lufr">https://rb.gy/l0lufr</a>

10 years, he has been engaged in teaching and research in the areas of Computational Mathematics and Data Analytics. He has an extensive knowledge and skills in various statistical and computational programming tools including Maple, MATLAB, Python, R and Arena. His Maple codes to solve Differential Equations have been incorporated into Maple. Additionally, he has also served as a Subject Matter Expert (SME) at USG e-Campus for Data Science course.

Dr. Kunwar has mentored more than 20 ASU undergraduate students on several projects in Computational Mathematics, Data Analysis and Disease Modeling through the Center of Undergraduate Research, Senior Project, and STEM Initiative Grant. He also contributed to the program proposal preparation for Nexus Degree, M.S. in Data Analytics and M.S. in Cybersecurity programs at Albany State. He also serves as an editor and reviewer in mathematics and statistics journals. He is engaged in grant writing and submission, and currently serves as a Co-PI and faculty fellow on NSF, NASA and NIH projects.

faculty mentors to engage in cutting-edge projects and to contribute to advancements in the field. AI plays a crucial role in enhanced decision making by helping researchers and leaders in making data-driven decisions as it provides insights and recommendations based on powerful analytical models. In addition, AI helps researchers in navigating through complex and complicated situations. It also helps researchers make a quick and timely decision by helping them choose the optimal paths for solving problems.

Most importantly, AI facilitates the collaboration between researchers among different disciplines. Interdisciplinary research projects benefit a great deal from the integration of AI tools and models to handle complex challenges. The demand of AI professionals is expected to grow explosively over the next few decades as it has become an essential driver of the present world of technological advancements/miracles. As a result, basic AI skills are counted as one of the most preferred skills for current undergraduate students to have.

In this presentation, I will focus on the significance of AI tools and techniques (more specifically: Machine Learning and Data Analytics) and their application in the diverse areas of research and work.



Dr. Nneka Nora Osakwe is a Professor of English, the Provost's Special Assistant for Internationalization and Global Engagement and the Director, Office of Transformational Student Experiences (OTSE), which embodies the Center for Undergraduate Research at Albany State University (ASU), Georgia. She is the author, editor, and co-editor of several publications spanning across themes on communication skills,

discourse analysis, instructional pedagogy in reading and writing, curriculum internationalization, and faculty/teacher professional development. Her most recent publications include articles in two Special Issues on Faculty-Curriculum Internationalization published by *International Research and Review (IRR) Journal* of Phi Beta Delta, Honor Society for International Scholars 2017 and 2022. She currently serves in the editorial board of IRR Journal. She is the founder and editor of *ASU Global Issues*. With over 30 years teaching experience at the university level, she has mentored numerous students in undergraduate and graduate research, including PhD. Dissertations.

Dr. Osakwe is a recipient of several awards and grants and was the Principal Investigator(PI) of the U.S. Department of Education Title VI-UISFL grant, which funded ASU's Curriculum Internationalization and Study Abroad initiatives, leading to the integration of global learning into over 100 courses at ASU. She is a research fellow of the American Association of University Women(AAUW), a Fulbright Hays Fellow-Malaysia and Singapore, a Rockefeller Foundation Residence Fellow, Bellagio-Italy, and a Study Fellow of the British Council- University College of St. Mark & St. John, Plymouth, U.K. Dr. Osakwe is also a recipient of the 2022-Award for Diversity, Equity, and Inclusion in International Educators (NAFSA) Region VII. She led the international education initiatives, which earned Albany State University (ASU), Georgia the 2023 NAFSA Spotlight Award for Curriculum Internationalization Initiatives.

# Title: Writing Effective Research Abstracts

An important aspect of academic literacy is writing effective and "readable" research abstracts. If an abstract to a project proposal, a research report or article is not readable, it would fail to clearly communicate the intentions and benefits of the work to readers. As a result, the writer might lose the audience's attention in further reading, leading to an unfavorable assessment of the main project or report. This workshop, points to clear understanding of two types of academic abstracts, their functions, and strategic "moves" in writing effective, readable, and successful abstracts. Participants will be introduced to concept of "discourse analysis" and will use illustrative examples to understand and write effective and winning abstracts.

#### February 29, 2024 4:00PM

WebEx Meeting link:

https://rb.gy/l0lufr

For Questions, Contact OTSE@asurams.edu

Phone: 229-500-2819