

MDF NEW FELLOWS' PROFILES: CLASS OF 2019-2020

Andrew Bernal

Economics, Florida International University



B.A., Economics, Florida International University

Research Interest

Andrew's research interests are in macroeconomics, with a focus on monetary economics. His goal is to evaluate and develop more effective monetary policy tools when central banks face the zero-lower bound (when the short-term nominal interest rate is at or near zero). This research could benefit economies which face impending recession while interest rates are at all-time lows due to a recent, past recession.

Stephen Bowen

Educational Leadership, Florida A&M University



B.S., Applied Mathematics, Florida A&M University

M.S., Management Information Systems, Florida State University

Research Interest

Stephen's research interest is in the area of PK12 schools of choice and their impact on academic preparation of African American youth. His goal is to provide research that looks at the return on investment (ROI) of state funded schools of choice. The benefit will be to help effectuate policy that will aide in African American youth student achievement.

Hardeo Chin

Aerospace Engineering, University of Central Florida



B.S., Mechanical Engineering, University of Central Florida

Research Interest

Hardeo uses high-speed optical diagnostics to analyze the complex flow fields of supersonic combustion. His current research involves measuring pressure gain associated with transient phases between deflagration and detonation to better understand how to improve engine performance under realistic conditions. He is also examining ways to increase detonation energy deposition in the ignitions of scramjets, ramjet variations whose combustion chambers operate with supersonic airflow.

Melissa Clairjeune

English Literature, Florida State University



B.A., English and African Studies, Brooklyn College

M.A., English, Brooklyn College

Research Interest

Melissa's research interests are 20th and 21st century Black literature across the African diaspora as well as representations of race and gender in film and television, with a focus on Black women, girls, and feminism(s). Her purpose is to contribute to scholarship on the fully lived experiences of Black females without prioritizing only one or two aspects of their identity.

Kellie Cooper

Health Education and Behavior, University of Florida



B.S., Exercise Science, Winthrop University

Research Interest

Kellie's research interests are in health behaviors and minority health. She conducts research on understanding sociocultural health influences and implementing behavioral interventions for obesity prevention and weight loss initiation and maintenance in underserved, minority, and cancer survivor populations. She hopes that her research will better society by providing new, feasible resources for those in need of health behavior changes.

DeVante' Dawson

Agricultural & Biological Engineering, University of Florida



B.S., Biology Pre-Health & Marine Biology, Tuskegee University

M.S., Biology, Tuskegee University

Research Interest

DeVante researches the impact of microplastics on environmental microbes. His goal is to gain an understanding of how these particles interact with living systems on a microbial level. This research will benefit society by providing more insight on the detrimental effects microplastics can have on living systems, as well as bring more awareness to the topic of microplastics in general.

Ardhys De Leon

Clinical Psychology, University of Central Florida



B.A., Psychology, University of South Florida

Research Interest

Ardhys is interested in researching the comorbidity of substance use and mental health disorders in emerging adults. She aims to identify how to mitigate the underlying self-regulation factors that lead to the onset and maintenance of these disorders. Furthermore, her goal is to develop cost-effective prevention and intervention methods to assist this at-risk population through community-implemented clinical approaches.

Daniel Delgado

Computer Engineering, University of Florida



B.S., Computer Engineering, Florida State University

Research Interest

Daniel researches natural user interfaces, human-computer interactions, and gesture recognition. The main objective is to develop computer systems which improve daily life by providing what is essentially an extension of the human body. The research performed will help people, including those with physical disabilities, perform tasks once considered arduous by the user (e.g., speech to text applications).

Isis Dwyer

Biological Anthropology, University of Florida



B.A., Anthropology & Cognitive Sciences, John Hopkins University

M.A., Anthropology, New York University

Research Interest

Isis researches population structure and variation in Afro-Caribbean and Afro-Latinx populations. Her goal is to create an interdisciplinary study of ancestry that takes into account skeletal morphology, population genetics, and the unique sociocultural frameworks of identity. Through this research, she hopes to challenge existing methods of ancestry estimation and create nuanced analyses surrounding race and ancestry in the forensic anthropology community.

O’Juan Edwards

Higher Education Administration, Florida State University



B.A., Human Resource Development, Oakland University

M.A., Higher Education Administration, Michigan State University

Research Interest

O’Juan researches HIV prevention on college and university campuses. His goal is to study people of color and issues concerning sexuality at historically black colleges and universities. O’Juan will focus on the lack of health care and access so the aforementioned groups can be well informed of HIV prevention such as taking PrEP.

Hamilton Ervin

Industrial Engineering, University of Central Florida



B.S., Industrial Engineering, University of Central Florida

M.S., Industrial Engineering, University of Central Florida

Research Interest

Hamilton strives to understand, and tap into, the creativity that exists within everyone. By studying creativity, specifically focusing on manufacturing creativity, Hamilton intends to leverage the neurons within the brain to manufacture the impulse that happens when a synapse transfers a message across neurons. By doing so, the goal will be to engender new ideas and solutions to push humankind further in the exploration of thought.

Maria Santiago Estevez

Chemistry, Florida International University



B.S., Chemistry, Florida International University

Research Interest

Maria’s research focuses on the neuronal calcium sensor DREAM, which is involved in memory, learning, and pain sensing as well as pathological conditions such as Alzheimer’s and Parkinson’s disease. She expects to characterize DREAM interactions with various intracellular partners in order to develop potential treatments. This research will provide critical insight into neuronal calcium signaling, as well as knowledge about the molecular mechanism of memory storage and learning and the role of neuronal calcium sensors in neurological diseases.

Wayne Farrell

Aerospace Engineering, University of Central Florida



B.S., Mechanical Engineering, University of Massachusetts Amherst

Research Interest

Wayne currently conducts research in the areas of unsteady aerodynamics and control in the context of aerospace and wind energy applications. The goal of his work is to produce improved unsteady aerodynamic models with a focus on usability in control system design. This work will benefit society through the advancement of wind farm and aircraft design and performance.

Jasmine Ferrell

Biomedical Engineering, University of Florida



B.S., Biochemistry, Mississippi State University

Research Interest

Jasmine's research is on the biomechanics of the patellar tendon. The goal is to obtain torque data that has yet to be discovered and compare it to ACL torque data which have already been heavily researched. This research will benefit society by helping orthopedic surgeons understand if the tendon is the absolute best replacement for ACL reconstructive surgery.

Sarah Garcia

Computer Science, University of South Florida



B.S., Computer Science in Engineering, University of Florida

Research Interest

Sarah's research focuses on collaborative spaces in virtual, augmented, and mixed reality technology. Her goal is to improve current collaboration capabilities and methods for future use in education, business, and entertainment. This research aims to use these growing technologies as a tool to improve communication and teaching methods among people in current society.

Benjamin Gardner

Marketing, Florida State University



B.A., Communications, Brigham Young University

M.B.A., Business Administration, Southern Utah University

Research Interest

Ben plans to research consumer judgement and decision-making, especially the effects of priming in different situations. He is also interested in consumer culture marketing theory, and more specifically, Hispanic-American marketing. This field of research is important for marketing managers, given demographic shifts over time, and will continue to be relevant as minority population growth outpaces the national average in America.

Krystal Giraudy

Biomedical Sciences, University of Florida



B.S., Biology, University of West Florida

Research Interest

Krystal will investigate non-coding RNA-mediated gene-regulation, with a special focus on microRNA and RNA processing enzymes, in Herpes viruses and their mammalian hosts. This research will further elucidate the biogenesis of these microRNA, the mechanisms by which they are expressed, and their impact on oncogenesis.

James Hernandez

Educational Psychology: Learning and Cognition
Florida State University



B.S., Psychology, University of Central Florida

Research Interest

James' research is founded in supporting educators. He aims to identify innovative school models that successfully support educators to equitably and dynamically empower their diverse students. In our rapidly diversifying world, this research will enable educators to better serve all learners by expanding opportunity where needed most.

Kris-An Hinds

Applied Anthropology, University of South Florida



B.A., International Studies, University of South Florida

M.A., Applied Anthropology, University of South Florida

Research Interest

Kris-An researches climate change and environmental injustices in the Food Energy Water Nexus of Caribbean coastal communities. Her goal is to influence adaptation and mitigation strategies used in governmental policies and organizational practices associated with climate change. This research seeks to benefit society by developing equitable, sustainable solutions and helping communities experience economic and environmental growth.

Trinity Johnson

Integrative Anthropological Science
University of Central Florida



B.S., Psychology, Stetson University

M.P.H., Public Health, Rollins College

Research Interest

Trinity researches the built environment as it relates to Black maternal and child health. Her goal is to develop and improve interventions that reduce health outcome disparities for Black women and children. This research could contribute to an overall decrease in maternal mortality in Black American women and also increase preventative, cost-effective health-care in the Black community.

Lybrya Kebreab

Mathematics Education, University of Central Florida



B.A., Political Science, University of California

M.A., Education-Curriculum & Instruction, Cal Poly Pomona

Research Interest

Lybrya is studying intersectional identity in mathematics learning and teaching. She is a former Mathematics Coach/Teacher on Special Assignment (TOSA) with 16 years in public education in urban/suburban schools. She plans to use her research to promote equity, access, inclusion and justice through the study of the beauty and joy in mathematics.

Bertha Ben Khallouq

Education, University of Central Florida



B.A., Psychology, California State University

M.A., Experimental Psychology, University of Cincinnati

Research Interest

Bee researches immigrant communities. She is particularly interested in communities that identify as sexual and gender minorities. Her goal is to better understand the social spaces, including in education and healthcare, navigated by immigrants. Her work is community-based and grounded in community psychology, which encourages understanding how individuals and communities interrelate.

Gabriela Peguero Kushner

Biomedical Sciences, University of Florida



B.S., Physiology, Michigan State University

M.S., Biomolecular and Biomedical Sciences, Glasgow Caledonian University

Research Interest

Gabriela is interested in understanding the molecular mechanisms that underly aging in health and disease. Her goal is to identify drivers of DNA instability in order to develop novel therapeutics for cancers and an array of age-related human afflictions such as degenerative diseases. This research aims to solve the deleterious outcomes of human health related to inadequate genome maintenance.

Lee Seng Lau

Biomedical Sciences, Florida International University



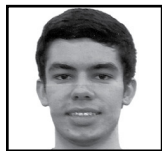
B.S., Biological Science, Florida International University

Research Interest

Lee researches changes in hepatocytes when exposed to certain chemicals. Her goal is to find ways to mediate cytotoxic effects caused by medications. This research will benefit society by reducing medication side effects that can eventually lead to new health problems in liver patients.

Rafael Leite

Clinical Psychology, University of Miami



B.A., Psychology, Florida Atlantic University

Research Interest

Rafael is interested in researching health disparities, obesity and chronic disease prevention, and health promotion. His goal is to develop and disseminate culturally sensitive health promotion interventions targeting both mental and physical health outcomes in minority communities. This research will help prevent the onset of chronic diseases as well as promote healthy lifestyle behaviors among minorities.

Richard Marrero

Clinical Pharmaceutical Sciences - Pharmacogenomics
University of Florida



B.S., Political Science and Biology, University
Central Missouri

Research Interest

Richard's research goals are to advance the field of pharmacogenomics and discover specific polymorphisms associated with a pharmacological response and clinical validation of genetic testing. To that end, the primary aims of his research are to develop clinical genetic tests that lead to more cost-effective healthcare, targeted drug therapy, and most importantly, improved patient outcomes.

Christian McDonald

Microbiology and Immunology, University of Miami



B.S., Biological Sciences, Florida International
University

M.S., Molecular, Cellular Developmental
Biology, University of Michigan

Research Interest

Christian will study microbial pathogenesis in the context of translational medicine and is particularly interested in pathogens affecting the maternal-fetal interface. He believes this area of translational medicine can be transformative, in that it bridges two sides of the research continuum—basic science and clinical research—and can significantly impact human health.

Lauren McKeever

Communication Sciences and Disorders
University of South Florida



B.A., Communication Sciences and Disorders,
University of South Florida

M.S., Speech and Hearing Science, Tennessee
State University

Research Interest

Lauren researches in the area of language development and literacy. She strives to bridge the gap between research and practice for effective early interventions that improve phonological awareness in children. Her goal is to adapt and apply established intervention frameworks to facilitate vocabulary development in children from low socioeconomic status and language minority homes.

Maria Metaweh

Clinical Science in Child and Adolescent Development
Florida International University



B.A., Psychology, University of Miami

M.S., Biostatistics, University of Miami

Research Interest

Maria's research addresses health and resource disparities in marginalized populations. Her goal is to eradicate these disparities, institutionalize interventions that improve mental health, and reinforce protective factors that cultivate resilience in underserved communities. This research will benefit society by reducing risk factors that impair quality of life as well as improving the accessibility and sustainability of care.

Alexandria Meyer

Cognitive Psychology, Florida State University



B.S., Psychology, University of Arizona

Research Interest

Alexa researches cognitive control and the functionality of the brain. Her goal is to develop strong neuroimaging techniques while exploring functional brain networks. She hopes her research will expand our understanding of the brain which, in turn, will allow us to modernize mental health treatments and diminish the stigma surrounding psychological and neurological disorders.

Jean-Claude Ndongo

Business Administration, Florida Atlantic University



B.S., Financial Management/Accounting,
Franklin University

M.B.A, Business Administration, Otterbein
University

Research Interest

Jean-Claude's research interests are international business, strategic management, and mergers and acquisitions. Leveraging his extensive professional experience in financial services, Jean-Claude will ensure that his research helps society better understand how strategic management decisions on issues such as international expansion or diversity and inclusion affect different financial institutions.

Cynthia Norris

Developmental Psychology, Florida State University



B.S., Community Health Education, Florida
State University

M.P.H., Florida A&M University

Research Interest

Cynthia researches individual differences in cognitive development, focusing on the role of moderating environmental components. Her goal is to develop psychometric tools and interventions to assess key factors that affect childhood learning. This research will benefit society by building evidence required to influence policies and practice in the education system.

Francesca Otero-Vargas

Marriage and Family Therapy, Florida State University



B.S., Family and Child Sciences, and Psychol-
ogy, Florida State University

M.A., Marriage and Family Therapy, Appala-
chian State University

Research Interest

Francesca researches the clinical application of mindfulness from a relational perspective with families, couples, individuals, and students. This research will focus on discussing cultural humility in this work and reviewing the research links between relational mindfulness and relationship satisfaction. Her goal is to continue her clinical and research advocacy with and for underrepresented groups and to ensure that Marriage Family Therapy scholarship and clinical services are inclusive.

Joshua Owens

Clinical Psychology, University of Florida



B.S., Psychology & Biology, Virginia Tech

Research Interest

Joshua will research cognitive aging, focusing on challenges faced by various cultural groups, with the intent of creating specific intervention strategies for these groups. This research will promote successful aging among our growing elderly population.

Dennis Parnell

Mechanical Engineering, University of Florida



B.S., Mechanical Engineering, University of
Alabama

Research Interest

Dennis researches microelectromechanicals (MEMS). His goal is to design and fabricate a MEMS-based heat flux sensor that can be used to predict the laminar-to-turbulent boundary layer transition in high speed conditions. Understanding where this transition occurs would provide important information to enable the design of more efficient aircrafts and lower the overall cost of manufacturing them.

Corey Perkins

Pharmaceutics, University of Florida



B.A., Chemistry, University of Delaware

Research Interest

Corey will pursue research in the field of drug discovery, specifically for chronic illnesses. During her time in graduate school, she plans to draw on her chemistry background to assess various therapeutic agents. She hopes her research will lead to the discovery of a curative medicine for a chronic illness for which there is currently no definitive cure.

Akira Gutierrez Renzulli

Clinical Psychology, Florida International University



B.A., Child Development, Tufts University

M.A., Child Development, Tufts University

Research Interest

Akira researches the role of positive relationships in promoting thriving, resilience, and school readiness among young children of color. She is particularly interested in populations who have experienced trauma associated with high poverty and parental separation. Her research aims to develop interventions that build and restore healthy, nurturing caregiver-child relationships and foster optimal outcomes for children who have experienced trauma.

Theodore Richardson

Astronomy, University of Florida



B.A., Astronomy, Cornell University

Research Interest

Theo's research focuses on applying the tools of computational physics to simulated spectra from quasars, with the goal of gaining insight into the processes of galaxy formation and the composition of the interstellar medium.

Hailey Baez Rivera

Computer Science and Engineering
University of South Florida



B.S., Computer Engineering, Universidad del Turabo

M.S., Computer Science, University of South Florida

Research Interest

Hailey performs research on multimodal sensing for object state classification. She aims to use audio and haptic sensing with machine learning to help automate cooking. This research focuses on teaching robots how to perform a common household task and will ultimately help improve quality of life for people with physical disabilities.

Briana Rodriguez

Audiology/Hearing Science, University of South Florida



B.A., Communications Sciences & Disorders,
Aging Studies, University of South Florida

Research Interest

Briana is involved in psychoacoustic and auditory behavioral research. Her goal is to help bridge the gap between theoretical frameworks and clinical applications in the field of hearing science. This research will contribute to our understanding of how humans listen when there is background noise. Additionally, this work should facilitate better communication among both normal-hearing individuals and those with hearing loss.

Xzaviar Solone

Biomedical Sciences, University of Florida



B.S., General Biology, Bethune-Cookman University

M.S., Integrative Biology, Kennesaw State University

Research Interest

Xzaviar researches angiogenesis and how it affects cancer formation. His goal is to develop new strategies to combat metastasis and further investigate angiogenic cellular signaling in tumors. This research will advance our knowledge of angiogenesis in cancer and could also result in the discovery of new biomedical markers, enhancing detection of the vast majority of cancers. Xzaviar hopes his research will help detect cancer earlier, positively impacting prognosis.

Francine Sutton

Texts and Technology, University of Central Florida



B.A., Art, Jackson State University

M.A., Urban & Regional Planning, Jackson State University

Research Interest

Francine intends to refine research interest of improving user experiences of older adults with little to no technology experience. Her goal is to use an interdisciplinary approach to define user's needs to improve overall quality of life through the iterative design process. This research will culminate through a mixed-methods research methodology.

Keith Tirimba

Astronomy, University of Florida



B.S., Physics with Specialization in Astrophysics, University of California

Research Interest

Keith studies star forming regions in the Milky Way's spiral arms. In pursuing his Ph.D., he will examine the star forming regions of the nearby Large Magellanic Cloud to further our understanding of how star clusters beyond the Milky Way are formed and evolve.

Taisha Venort

Agricultural & Biological Engineering, University of Florida



B.S.E., Environmental and Ecological Engineering, Purdue University

M.S.E., Agricultural and Biological Engineering, Purdue University

Research Interest

Taisha's research focuses on farmer strategies in Laikipia County Kenya, where large horticulture and grain crop farms and small horticulture and food crop farms compete over declining water resources. Her goal is to help determine whether exchange of capitals can improve the environment. This research will advance conservation agriculture practices to attenuate the degradation of land management systems.

Donna Williams

Public Health, Florida A&M University



B.S., Health Science/Occupation & Wellness, Florida A&M University

M.P.H., Behavioral Science, Florida A&M University

Research Interest

Donna's research interest is Maternal and Child Health, specifically birthing complications in African American women. Her goal is to research why prematurity is higher in African American women than women of any other ethnicity. She is particularly interested in exploring socioeconomic factors. The benefits of this research will include decreased prematurity, improved access to care, and better outcomes for women and newborn babies.

Daniel Zengotita

Political Science, University of Florida



B.A., Philosophy, History, and Law & Society, Florida International University

M.A., History, Florida International University

Research Interest

Daniel researches the intersecting ideas of race, punishment, technology, ethics, and the political imagination. In his work, he analyzes the socio-historical legacy of positivist ideas and how they have become embedded and amplified in our present media-oriented world. His research will aid in crafting public policy addressing the social problems of racism, criminality, retributive punishment, inequality, and discrimination.

McKnight Fellows & Graduates,
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