Research Interests:
• Behavior Medicine, Health Disparities,
• Disaster and Trauma,
• Aging, Spirituality, and Well-being

Study 1: Interdisciplinary survival analysis on patients with advanced heart diseases
Study 2. Hurricanes Maria and Michael
Study 3. National data on Latino and Asian population
Study 4. An interdisciplinary clinical trial on HTN

How a Collaborator Could Help Me:
Working on statistical analysis, exploring new opportunities cross disciplines, writing for publications

How I Could Help a Collaborator:
My broad training expertise in health, mental health, aging, and beyond, as well as grant writing skills
Feng Bao

Department of Psychology

bao@math.fsu.edu

Research Interests:
• Data assimilation,
• Uncertainty quantification,
• Stochastic optimization

My research lies in applied and computational mathematics with emphasis of real world application.

How a Collaborator Could Help Me:
I want to seek collaborators from different areas to apply the mathematical methods that we developed to solve their problems

How I Could Help a Collaborator:
I could offer rigorous mathematical methods to solve scientific or engineering problems encountered by my collaborators
Sindy Chapa
School of Communication
schapa@fsu.edu

Research Interests:
• Hispanic Consumers,
• Multicultural Marketing Communication

Dr. Sindy Chapa is Director of the Center for Hispanic Marketing Communication at FSU. Her research concentrates on understanding Hispanic and cross-ethnic consumer behavior in the area of cross-cultural marketing communication and advertising. Dr. Chapa co-authored the Hispanic Marketing Communication book, third edition, and her research has been published in recognized academic journals including International Journal of Advertising, Journal of Advertising Research, International Business & Economics Research, Journal of Marketing Communication, Journal of Spanish Language Media, Journal of Consumer Behavior, and Journal of Multidisciplinary Business Review among others.

How a Collaborator Could Help Me:
Stimuli Development, Data Collection and Literature review. Flexible.

How I Could Help a Collaborator:
Research Design, Online Data collection, Data analysis.
Satyanarayan Dev

College of Engineering

sdev@fsu.edu

Research Interests:
- 4D Printing,
- Bio-robotics,
- Food Safety

Developing a Bio-robot using 4D printing techniques to enhance food safety

How a Collaborator Could Help Me:
Work with their capabilities to advance the applications of my research outcomes

How I Could Help a Collaborator:
Tailor the deliverables to accomplish the collaboration, while accomplishing my own research and technology development objectives
Research Interests:
• Public policy,
• Public Management,
• Diversity Management

I am currently interested in the adoption and management of public policies. Most of my current research examines how policies are adopted and how these policies may influence outcomes for different groups with a particular focus on marginalized groups. I am very interested in the higher education setting using colleges and universities as examples of large complex organizations serving diverse stakeholder groups.

How a Collaborator Could Help Me:
I am interested in collaborators with expertise in STEM disciplines that can inform social science research.

How I Could Help a Collaborator:
I have interdisciplinary training in public policy, public management, and econometric methods.
Research Interests:
• Family relationships,
• Well-being in emerging adults,
• Burnout

Psychological functioning in romantic relationships, well-being in emerging adults, and burnout in educational settings. Research attempts, inter alia, to document cardiovascular markers of core psychological constructs investigated.

How a Collaborator Could Help Me:
Provide expertise in, and ideally processing of, bio-markers related to stress.

How I Could Help a Collaborator:
Developing and writing grant applications, dyadic data analysis, sharing extant data. Collection of data on cardiovascular functioning.
Research Interests:
• Developing and implementing of international strategy;
• Developing international partnerships and research collaborations;
• Taking advantage and managing funding opportunities: national, international, corporate, philanthropic.

Finding, winning, and managing contracts for sponsored research funding

How a Collaborator Could Help Me:
I would like to explore research management structure of FSU. For preparing work plan for a research management reform project at my home institution I would like to discuss with my potential collaborator a few topics, for example: “How the administration does stimulate interest in continuous professional development of the academic and administrative staff in field of finding, winning, and managing contracts for sponsored research funding?”

How I Could Help a Collaborator:
I’d like to share all research events at my home university in order to involve all potential collaborators from FSU to take part at our international conferences and at seminars, international programs, trainings for scientific and professional staff and for exchange of experience.
Research Interests:
• Biomaterials,
• Regenerative medicine,
• Drug delivery

My research aims to control the delivery of nanotherapeutics carrying a range of bioactive factors (proteins, nucleic acids, drugs) for tissue engineering and regenerative medicine applications. Special areas of focus include: surface modification techniques; therapeutic delivery coatings; and, vascular and bone tissue engineering.

How a Collaborator Could Help Me:

Seeking: novel materials or nanoparticles to modify for tissue engineering applications; expertise in endocytic mechanisms; collaborators with access to human adipose or bone marrow tissue samples/stem cells.

How I Could Help a Collaborator:

I can assist in developing therapeutic delivery coatings (for implants, scaffolds, etc...) for specific applications.

Experience with rat, mouse, and rabbit tissue engineering transplantation models, particularly in bone, including mesenchymal stem cell transplantation studies.
Research Interests:
• Rules of War in Christianity and Islam;
• Middle East Policy;
• Security Studies

I am working on a book about the relationship between religion and revolutionary violence. One of the cases I examine focuses on the role of Osama bin Laden. I have written previously on bin Laden and other jihadists with respect to the portions of Muslim tradition they cite in support of their cause. The current work deals with bin Laden's biography, as well as placing him in a comparative ethics context.

How a Collaborator Could Help Me:
Since the social dynamics of revolution are complex, I would welcome collaboration from others working on the topic using the method of comparison.

How I Could Help a Collaborator:
I bring a good knowledge of Christian and Muslim traditions to the subject, both in the sense of broad knowledge about theology, jurisprudence, and history, and in the sense of a deep acquaintance with certain cases.
Mike Killian
College of Social Work
mikekillianphd@gmail.com

Research Interests:
• Pediatric health,
• Organ transplantation,
• Advanced statistical methods,
• Practice-based research
• Social work practice with children and families and research into child health and wellbeing
• Psychosocial determinants of health and social work practice
• Quality of life and adherence to medical regimens outcomes in pediatric chronic illness
• Psychometrics and measurement methodology in social work practice and research
• Advanced statistical and quantitative methodologies in social work practice and education

How a Collaborator Could Help Me:
Statistical support and applied focus in health care services for children and families.

How I Could Help a Collaborator:
As Research Scientist for the Center for the Study and Promotion of Communities, Families and Children at the FSU College of Social Work, I represent the research capacity and interests of four centers and institutes within the College of Social Work. Collectively, we have a great deal of data and possible research collaborations including from justice research, college student mental health and resiliency, interpersonal and family violence, and diagnostic evaluation and consultation services for children and youth.
Research Interests:
• Oceanography
• Aerosol chemistry

I study the chemistry and flux of aerosols to the ocean and the impact this has on phytoplankton primary productivity (relevant to the global carbon cycle).

How a Collaborator Could Help Me:
Offer new analytical techniques to study aerosol chemistry and solubility in the oceans.

How I Could Help a Collaborator:
I have aerosol sampling equipment and analytical expertise for trace elements.
Bruce Locke

Department of Chemical and Biomedical Engineering

blocke@fsu.edu

Research Interests:
• Water and air pollution treatment
• Green chemical processing

Developing and analyzing non-thermal plasma reactors for applications in chemical, materials, environmental, agriculture, and medical applications.

How a Collaborator Could Help Me:
Assist in the applications of our basic technology to other areas.

How I Could Help a Collaborator:
Knowledge of plasma chemistry and processing.
Ian MacDonald

Earth, Ocean & Atmospheric Science

imacdonald@fsu.edu

Research Interests:
• Oil in the ocean,
• Deep sea ecology,
• Scientific imaging & GIS

Quantifying the rate of discharge from the ongoing Taylor Energy oil spill; assessing marine biodiversity; developing quantitative imaging techniques.

How a Collaborator Could Help Me:
I need collaborators for deep learning and image processing.

How I Could Help a Collaborator:
I have prototype autonomous video devices for use in marine environments, which would be available for FSU researchers or students.
Marcia Mardis
College of Communication & Information
mmardis@fsu.edu

Research Interests:
• Educational informatics,
• Educational leadership,
• Educational research

My research intersects learning resources, high-speed networking, and professional identity creation with particular emphases in educational informatics, professional preparation, STEM learning, text mining, and educational policy. My current work centers on the professional identity

How a Collaborator Could Help Me:
I am looking for someone who can help me expand the disciplinary application of my technician career pathways research work, especially in the areas of health.

How I Could Help a Collaborator:
I have extensive experience with proposal development, dissemination, sustainability, and project management, especially with the National Science Foundation.
Research Interests:
• Psychocardiology,
• Intra and interpersonal processes,
• Negative and positive affect

My expanding research program focuses on Psychocardiology, the interplay between psychological states and physiology. Specifically, my research investigates the relationship between hemodynamics, cardiac autonomic modulation, and affective states both intra and interpersonally (couples and families). My current constructs of interest include negative affect (i.e. anger, anxiety, burnout, and depression), forgiveness, and mindfulness.

How a Collaborator Could Help Me:
I am looking for new collaborators that have had success with large scale grant funding (i.e. NSF, NIH) and/or are interested in pursing this scale of grant work. I am open to creative ideas and merging research teams. I am especially interested in starting new research projects utilizing health related outcomes and/or inequality issues.

How I Could Help a Collaborator:
I have expertise in a variety of statistical analyses and data collection methodologies, including data collection from couples and families, and measurement of hemodynamics, heart rate variability, and blood pressure variability. I have also had some success with attainment of grant funding.
Research Interests:
• Climate change,
• Archaeology,
• Remote sensing

I study Native American archaeology in the Southeast USA. My work focuses on earthen and shell mound villages, sea level rise, deltaic landscapes, flooding, and historic preservation.

How a Collaborator Could Help Me:
Ecologists who know remote sensing can help study landscapes and vegetation, unmanned aerial systems specialists can help with survey, geologists can help with sediments and stratigraphy, satellite and aerial imagery people can help with reconnaissance and studying changes to landscapes.

How I Could Help a Collaborator:
I am excellent at translating esoteric research into concepts and topics understandable by the lay public and younger students.
Research Interests:
- Quantum and Atomistic Simulations,
- Machine Learning,
- Energy/Materials

Our research philosophy focuses developing computational methods and algorithms needed to solve problems in condensed matter physics, chemistry, material sciences as well as in scientific computing and engineering. We also collaborate with experimentalists and other theoreticians to complement each other methods in the quest of further advancing knowledge and understanding of phenomena. Our lab has been pioneering Materials by Design in combination with first principles simulations, as well further expanding quantum mechanical simulations and dynamics and their applications.

How a Collaborator Could Help Me:
Experimentalists willing to listen to our prediction and vice-versa would be an optimal team member. We have designed several new materials and predict their properties using different approximations, it would be optimal to find experimental collaborators to proof or disproof our predictions and the other way around. By using our arsenal of quantum and atomistic simulations, as well as Big Data and Machine Learning techniques, we can aid at pretty much any problem or help explain any physical phenomena. This is combined with our expertise in theoretical tools from chemistry and physics, including our expertise in coding and implementing unique algorithms.

How I Could Help a Collaborator:
By using our arsenal of quantum and atomistic simulations, as well as Big Data and Machine Learning techniques, we can aid at pretty much any problem or help explain any physical phenomena. This is combined with our expertise in theoretical tools from chemistry and physics, including our expertise in coding and implementing unique algorithms.

I have presented over 27 invited talks related to these research topics since becoming an independent researcher, and our work has been cited more than 4,111 times according to Google Scholar (August, 2018) with an average of 200 citations per paper, with 15 papers as independent PI.
Sunny Narayanan

Nutrition, Food and Exercise Sciences

anarayanan@fsu.edu

Research Interests:
• Space physiology,
• Medical physiology,
• Engineering

Characterizing the effects of spaceflight (microgravity, radiation, isolated environment, etc.) on astronaut physiology and the cardiovascular (heart, arteries, veins, and lymphatics) and immune systems, utilizing basic biomedical science techniques and rodent/cell culture models.

How a Collaborator Could Help Me:
Diversify research expertise and tools, pursue new routes of interdisciplinary/complementary research

How I Could Help a Collaborator:
Diversify research expertise and tools, pursue new routes of interdisciplinary/complementary research, provide perspective of someone with over 10+ years of NASA experience, an engineering background, and historically consistent multi-disciplinary research experience.
Research Interests:

• Electric Power and Propulsion,
• Computer Science/Cyber Security,
• Social Science and Economics

Power electronics and electric machines for electric power and electric propulsion systems (electric grid, electric ship, electric aircraft)

How a Collaborator Could Help Me:

We are looking for team members/collaborators in social science, business/economics, and political science to help identify societal impacts, develop convergent technology ecosystem, policies, etc for resilient electric grid, electric aircraft, and electric ship.

How I Could Help a Collaborator:

Jointly submit a center proposal to NSF and provide research opportunities in their own areas.
Juan Reza
Department of Biological Science
juan@juanreza.com

Research Interests:
• Space Biology (Mars Exploration),
• Computer Simulation of Molecular Biological Systems,
• Effects of low-pressure and gas composition on plants.

Leading a team for the NASA Mars Greenhouse design with research toward potential genetic enhancement of food and soil organisms to suit Mars missions. Also, developing software analysis and visualization of DNA-nucleosome complexes, potentially useful in planning understanding metabolic pathways.

How a Collaborator Could Help Me:

The Mars-exploration biology/genetic enhancement of foods effort currently involves agronomics, molecular biology, aerospace engineering design. Several NASA grant opportunities are on-going or annual that guide the research scope and which we can apply for funding. Access to FSU license to SolidWorks Research software and 3d-printing would be a big advantage toward meeting NASA research opportunities.

How I Could Help a Collaborator:

Labs and PI's with students seeking a project can benefit by having them work on a Space Science project to be announced by NASA. During Spring and Summer 2019, I will hold preparatory sessions to form a newly configured student team to prepare them for the kind of effort required to meet the requirements of NASA's specifications. I am currently the lead student for the NASA Mars greenhouse team which include students from FAMU's Bioengineering dept. For this project I have created operational apparatus, drafted proposals, budget, scripted videos, and defined the system approach. See http://bigidea.nianet.org/ . I have a background in software engineering and micro-controller programming that I would like to apply to research in the field of molecular biology. I am open to joining a collaborator with requirements matching my skill set as well.
Kari Roberts
National High Magnetic Field Laboratory

kari.roberts@magnet.fsu.edu

Research Interests:
• Workforce Development in STEM,
• Informal STEM Education,
• Women in STEM

I currently research the role of informal K-16 science education programs in the development of participants’ STEM Identity.

How a Collaborator Could Help Me:
A collaborator with access to K-16 students with interests in different STEM fields could help us expand the reach of programs we currently offer.

How I Could Help a Collaborator:
We can offer our existing informal science education programs as a space to reach K-16 students and test drive new research questions and activities.
Gregg Stanwood
Biomedical Sciences
gregg.stanwood@med.fsu.edu

Research Interests:
• Neurobiology,
• Pharmacology,
• Mental health

Developmental Origins of Brain Disorders

How a Collaborator Could Help Me:
Bring complementary approaches and ideas to the table

How I Could Help a Collaborator:
Experienced in working in teams, multi-PI grants, center mechanisms; lab uses modern neurobehavioral, anatomical and cell biological approaches to study the brain
Marianna Tutwiler

College of Social Work

mtutwiler@fsu.edu

Research Interests:
• Child welfare,
• Racial equity,
• Vulnerable families

The Florida Institute for Child Welfare is currently conducting research for quality standards for residential group care, longitudinal study on Florida's child welfare workforce, curriculum development for therapeutic providers working with child welfare families, use of predictive analytics in child welfare, provision of behavioral health services to parents involved in child welfare; evaluation of: Early Childhood Court, Guardianship Assistance Program, and pre-service training for child welfare workers.

How a Collaborator Could Help Me:

The Florida Institute for Child Welfare seeks to promote safety, permanency, and well-being among the children and families of Florida that are involved with the child welfare system. The Institute sponsors and supports interdisciplinary research projects and program evaluation initiatives that contribute to a dynamic knowledge base relevant for enhancing Florida's child welfare outcomes.

How I Could Help a Collaborator:

We have expertise in the above research areas and can work with other disciplines who may work with our population of interest but don't have the knowledge base regarding their myriad needs.
Inken von Borzyskowski

Political Science

i.borzyskowski@fsu.edu

Research Interests:
- Political violence;
- Foreign aid;
- International intervention

My research focuses on the domestic politics of international relations with an emphasis on international organizations and their effect on domestic conflict and elections. Specifically, my research falls into three areas: international democracy assistance; the causes and consequences of election violence; and international organizations’ membership politics (withdrawals and suspensions). I also did a major field research project with the USIP in Kenya and Liberia on preventing political violence.

How a Collaborator Could Help Me:
Research funding

How I Could Help a Collaborator:
Scientific research design and analysis to assess the effects of interventions and figure out what works
Cindy Wilson

Department of Family and Child Sciences

cbwilson2@fsu.edu

Research Interests:
• Child, Adolescent, and Family Prevention Programs
• Community-Based Family Life Education

Community-Based Family Life Education and other prevention programs

How a Collaborator Could Help Me:

In addition to my faculty role in the Department of Family & Child Sciences, I will be assuming the role of Executive Director of FSU’s Florida Center for Prevention Research starting February 1, 2019. I will be seeking additional grants related to FCPR’s mission to prevent problem behaviors such as substance abuse, divorce, sexual violence, adolescent pregnancy/STDs, and other social problems affecting individuals across the lifespan.

How I Could Help a Collaborator:

The FCPR has experience working with a number of diverse projects at the local, state and federal level. We are very open to working with other academic departments and research institutions to collaborate on future projects that would benefit children, adolescents, families, or other individuals across the lifespan.
Research Interests:
• Mother-child interaction
• Depression
• Substance use

My research interests focus on emotional processes within the family and their role in the intergenerational transmission of psychopathologies from parents to children. I am also interested in examining the efficacy of family therapy interventions aimed at improving parent-child emotional interactions.

How a Collaborator Could Help Me:
Write research papers and apply for research grants

How I Could Help a Collaborator:
Write research papers and apply for research grants. I'm statistical savvy and well-trained in developmental methodology.
Research Interests:
• Land-atmosphere interaction;
• Urban microclimate;
• Computational fluid dynamics

Understanding thermo-fluid dynamics at the interface of the earth surface and lower atmosphere, using computational methods

How a Collaborator Could Help Me:
Any researcher with questions/problems concerning the dynamics of the flow and heat transfer at the interface of the earth and lower atmosphere is a potential collaborator for me.

How I Could Help a Collaborator:
Through my computational-based research, I can provide detailed information of the dynamic and the spatiotemporally variable effect of the atmospheric flow (at human scales) on the earth surface terrain (buildings, vegetation, ...). This information may include the details of the wind flow field, and matter and energy transport.
Research Interests:
- Bioinformatics
- Text mining,
- Big data

I work in bioinformatics and computational biology in general. Currently, we work on understanding biomolecular sequence-structure-function relationships. We also work on genomics data analysis, data integration, data mining and text mining using deep learning method.

How a Collaborator Could Help Me:
Doing research, writing papers and applying for grants.

How I Could Help a Collaborator:
Provide expertise in my research area.
Qian Zhang

Department of Educational Psychology and Learning Systems

qzhang4@fsu.edu

Research Interests:
• Longitudinal data analysis
• Multilevel modeling,
• Mediation and moderation analysis,
• Missing data problems

How a Collaborator Could Help Me:
I am looking forward to collaborating with a potential researcher on papers and grant applications using my expertise.

How I Could Help a Collaborator:
I am interested in statistical analysis in social science studies. In particular, my research focus is in longitudinal data analysis, multilevel modeling, mediation and moderation analysis, and missing data problems.
Research Interests:
• Cancer communication
• Minority Health Disparities
• Quality of life among cancer survivors

Prostate cancer is my primary area of research. I am interested in the development of culturally tailored interventions to improve cancer communication and quality of life among cancer survivors and their families. The use of biochemical markers to examine quality of life and stress along with measures of cognitive functions among cancer survivors is a pertinent aspect in my field of research. Research in the health disparities experienced by minorities which is focused on increasing awareness, education, and preventative screening behaviors is a priority in my research.

How a Collaborator Could Help Me:
A collaboration can foster research in cognitive functions, culturally tailored interventions to improve cancer communications, quality of life, and chronic stress among cancer survivors.

How I Could Help a Collaborator:
A collaboration can foster research in cognitive functions, culturally tailored interventions to improve cancer communications, quality of life, and chronic stress among cancer survivors.
Research Interest(s):
• Reading Development
• Language Development
• Intellectual and Developmental Disabilities

My research is centered around characterizing the linguistic skills children with intellectual and developmental disabilities (IDD) use for reading development, inclusive of those children with limited speech ability. My work examines relationships between speech ability, vocabulary knowledge, receptive language, phonological awareness, and access to home and school literacy instruction during developmental periods of early childhood, preschool, and elementary school.

How a Collaborator Could Help Me:
Collaborators to my work that would be helpful include individuals who have advanced statistical training for intervention research methods, or collaborators that are interested in curriculum development and test development, or have experience/knowledge regarding eye tracking and data collection using automated software in the behavioral sciences

How I Could Help a Collaborator:
Provide content knowledge related to children with developmental disabilities, their language, and reading development
Research Interest(s):
• Neuropsychiatric diseases
• Ion channels and receptors
• Protein quality control

Molecular, synaptic and neural circuitry basis of mental disorders;
Mechanism and functions of synaptic regulatory proteins;
Molecular and cellular mechanism of neurodegenerative diseases

How a Collaborator Could Help Me:
Clinical application of our research;
Develop new research projects

How I Could Help a Collaborator:
Expertise in electrophysiology, animal models of human diseases
Tim Megraw  
College of Medicine  
Timothy.Megraw@med.fsu.edu

Research Interest(s):
• Microtubules  
• Zika virus  
• Cytoskeleton  

My research program focuses on the cell biological and in vivo pathologies of diseases involving cytoskeleton functions. These include metabolic, neurological and neurodegenerative diseases, and the cell biology of Zika virus pathogenesis.

How a Collaborator Could Help Me:
My research program will benefit from collaborative expertise in protein and macromolecular structural methodologies.

How I Could Help a Collaborator:
I can provide expertise in the use of genetics, cell biology, and molecular approaches to disease pathology in vivo.
Research Interests:
• Rural health in underserved populations
• Health promotion

I have conducted two cluster randomized trials. (1) Cardiovascular health promotion program to analyze intervention effects of attitudes, norms, self-efficacy, and intentions to increase produce consumption, reduce dietary fat intake, and exercise more. (2) Testing a diabetes health program regarding diabetes self-care and associated factors including social support and diabetes fatalism. This research is currently in the data analysis phase.

How a Collaborator Could Help Me:
I would like to collaborate with others in brainstorming innovative ideas and building inter-professional teams to increase the possibility of obtaining external grant funding.

How I Could Help a Collaborator:
I can help a potential collaborator during every step of the research process beginning with developing a research plan, writing a grant application, conducting the research, and disseminating the findings in publications and presentations.
Jonathan Adams

School of Information

jladams@fsu.edu

Research Interests:
• Machine learning
• Artificial Intelligence
• Autonomous aerial systems

My current research areas include: Online learning, technology use and practices, and autonomous aerial systems.

How a Collaborator Could Help Me:
TBD

How I Could Help a Collaborator:
TBD
Research Interests:
- Experimental fluid dynamics
- High Sped Flows
- Flow & Noise Control

Recently my research has focused on developing and refining active flow and noise control technologies to reduce noise from and increase the efficiency of high speed aircraft, automobiles and turbomachinery (compressors, turbines) using advanced actuators, especially micro-fluidic actuators. I hold a number of patents in this area. The development and use of advanced diagnostics, especially non-intrusive optical techniques for fluid flows is also an active area of research.

How a Collaborator Could Help Me:
Identifying potential research opportunities and collaborators.

How I Could Help a Collaborator:
Identifying our research capabilities
Olugbenga Anubi

Department of
Electrical and Computer
Engineering

anubi@eng.famu.fsu.edu

Research Interests:
• Resilient, Robust and Adaptive Control
• Real-time Optimization
• Vehicle Dynamics and Control
• Robotics

I sit at the intersection of Control and Optimization - using optimization to solve challenging control problems and using control to design optimization algorithms. My application domains ranges from large-scale industrial cyber-physical systems to small-scale autonomous systems.

How a Collaborator Could Help Me:
Identify and define challenges in their area where real-time optimal decision making is critical

How I Could Help a Collaborator:
- Make decision process faster
- Secure control for cyber-physical systems
- Design real-time algorithm for desired system behavior
- Adapt Machine Learning for autonomous and continuous process monitoring
Research Interests:
• Osteoarthritis
• Osteoporosis
• Cardiovascular disease

Interests include examining the role of nutrition as more than just a means to support one’s life. The father of medicine, Hippocrates, said, “Let food be thy medicine and medicine be thy food.” Therefore, I study the role of functional foods, bioactive compounds, and nutraceuticals in prevention and treatment of chronic diseases and conditions, such as osteoporosis, cardiovascular health, and osteoarthritis, in vitro, in vivo, and in clinical trials.

How a Collaborator Could Help Me:
Our team could benefit from physicians, researchers, and biostatisticians, as well as experts in geriatrics.

How I Could Help a Collaborator:
I can provide expertise with respect to conducting clinical studies, including osteoporosis and osteoarthritis.
Research Interests:
• Mindfulness-Based Interventions

I am currently looking at associations between trait mindfulness, variables of distress, and resilience in informal caregivers of medically complex children.

How a Collaborator Could Help Me:
I am a novice researcher and a collaborator with experience could help me with the logistics of my program of research. My current research is a major focus point in NINR and NIH grants and I would eventually like to reach my goal of obtaining one of them. A collaborator could help me in reaching that goal.

How I Could Help a Collaborator:
I have lived and worked in Tallahassee in the healthcare field for 18 years. Through my employment as a staff nurse, and then as a nurse educator, I have several community connections.
Research Interests:
• Plant genomics & chromatin structure
• 3D cell imaging with deconvolution fluorescence microscopy,
• G-quadruplex DNA

Our research makes use of maize (corn, Zea mays L.) as a model genetic system to investigate inheritance and nature of genetic material at the cellular and molecular level. Specifically: (1) role of telomeres and nuclear envelope-associated LINC complex in meiotic chromosome dynamics and segregation, (2) functional genomics of chromatin structure and genome response using DNS assays, and (3) G-quadruplex/G4 DNA and guanine modification in gene regulation associated with energy stress.

How a Collaborator Could Help Me:
mathematical modeling of biological networks (signaling, gene regulation), 3D printing/visualization of 3D image datasets, engineering components for plant adaptation chambers (J Reza’s doctoral research area in my lab) to space environment simulators. (NOTE: I am unable to attend, travel conflict)

How I Could Help a Collaborator:
Genomics, biologist, plants, image server (omero@bio.fsu.edu), test datasets for mathematical analysis. (NOTE: I am unable to attend, w/ travel conflict the week of Oct 15)

Our experimental approaches include classical genetics and molecular biology, 3D fluorescence microscopy, structural genomics, functional genomics, and bioinformatics.
Research Interests:
• Nutritional Physiology
• Metabolism
• Hypoxia

My lab studies physiological and metabolic adaptations to nutritional, environmental, and hormonal interventions in humans, specifically energy expenditure at high altitude, hypoxia and weight loss, determinants of total and regional body composition, and lipid and lipoprotein metabolism.

How a Collaborator Could Help Me:
Mass spectrometry expertise and equipment, knowledge of environmental effects (e.g., high altitude) on stable isotope metabolism, statistical methods

How I Could Help a Collaborator:
Expertise in dietary interventions and body composition assessment; experience studying systemic hypoxia and using stable isotope methods to measure fat, protein, and carbohydrate metabolism
Research Interests:
• Developmental neuroscience
• Cognitive neuroscience
• Movement disorders

My current research areas include ADHD, traumatic brain injury, dystonia, and neurodevelopmental disorders.

How a Collaborator Could Help Me:
Clinical researchers who could bring valuable expertise in the fields of ADHD, traumatic brain injury, dystonia.

How I Could Help a Collaborator:
We can offer expertise in animal (mouse) models for neuro-psychiatric disorders (ADHD, traumatic brain injury, dystonia).
Research Interests:
• Air/Sea Interaction
• Remote Sensing
• Ocean/wave/atmosphere Modeling

Currently active in the remote sensing of ocean surface currents, the impacts of surface currents on Ocean/wave/atmosphere Modeling, remote sensing of ocean surface vector winds and stress.

How a Collaborator Could Help Me:
Applications of remotely sensed surface winds, currents, and surface stress. Applications of coupled ocean/waves/currents models. Improved modeling of wave coupling.

How I Could Help a Collaborator:
Develop applications and science goals for satellite measurements of surface currents at high resolution (5km resolution or slightly better), and assimilation of observations into models.
Research Interests:
• Deep sea ecology
• Coral biology
• Chemosynthetic ecosystems
• Deep sea and shallow water coral ecology
• Chemosynthetic systems

How a Collaborator Could Help Me:
I am interested in technologies that can help analyze biological systems and improve scientific and outreach products.

How I Could Help a Collaborator:
I can provide biological context and data on local nearshore and Atlantic/GOM deep sea ecosystems.
Research Interests:
• Health Equity
• Maternal and Child Health
• Wellness/Mental Health

I am Family Physician and 2017 graduate of the George Washington University Leaders for Health Equity Fellowship & Atlantic Fellow. Interests include promotion of MCH equity through community-engaged research and empowerment of women/girls. I am exploring research that creates paths towards health equity (qualitative and secondary data analysis), addresses racism, and partnering with the community to develop an MCHE ambassador program. Other interests include mentorship, faculty development, and the pipeline for URM students into medicine.

How a Collaborator Could Help Me:
Partnering with someone with expertise in health disparities research methodology and analysis would be helpful. Additionally, sharing information about established training for community health leaders/navigators would also be welcomed.

How I Could Help a Collaborator:
I can offer experience in community engagement and collaboration, health equity pursuits, and some pearls on community organizing as a health equity leadership practice.
Research Interests:

- Religion
- Science
- Environment

The ways in which the memory of past disaster is recorded and transmitted (or fails to transmit) across generations through documents, monuments, sites and rituals. My particular research on this subject examines Japan, from 800 to 1900, covering a number of social, economic, political and technological contexts through looking at one society over a long period of historical change.

How a Collaborator Could Help Me:

I am interested in doing comparative work, either cross-cultural or cross-temporal, about issues of risk awareness and assessment for disasters, and about community-level preparedness and recovery. The issue of memory is often a moral one, even for disasters that occurred long ago (as in the debates in Japan over awareness of the 869 tsunami after 2011), and I would like my research to address and speak to these issues.

How I Could Help a Collaborator:

Disaster studies are often interdisciplinary, and I can contribute insights from religious studies, and as a specialist in Asian religion and cultures. I also work in issues of archive theory and preservation, and have connection with researchers working on disasters and their history in Japan.
Research Interests:
• Clinical trials
• High-throughput Omics data analysis
• Mental health outcome

High dimensional and large scale statistical analysis, Survival analysis, longitudinal data analysis, biostatistics, bioinformatics and statistical applications in public health, medicine, education, and psychology, among others.

How a Collaborator Could Help Me:
My long term goal is to find a substantive collaborate to motivate development of new statistical methodologies. I can get involved from the beginning of the research design, data collection, data analysis and results interpretation. During this process, I am hoping to learn the scientific questions and reasonable assumptions imposed in the statistical modeling. Meanwhile, I am hoping to use dataset collected by scientific collaborators to write statistical methods R01 grant proposal.

How I Could Help a Collaborator:
As a statistician, I can help scientific collaborators to analyze data, explain the modeling and interpret results. I am willing to invest myself to learn a new substantive area and be expert both in statistical methodology and subject area.
Henry Carretta

Department of Behavioral Sciences and Social Medicine

henry.carretta@med.fsu.edu

Research Interests:
• Service utilization in adults with autism
• Chronic disease epidemiology and the social determinants of health
• Service utilization in adults with Alzheimer’s disease

Describing health services utilization among adults with autism using public and private claims data. Examining the relationship between the social determinants of health and Alzheimer’s disease outcomes. Program evaluation of the Florida statewide Medicaid managed care waiver.

How a Collaborator Could Help Me:
Proposal development and content expertise.

How I Could Help a Collaborator:
Expertise in Big Data analysis and manipulation using public and private insurance claims or electronic health records.
Rob Carroll

Department of Political Science

RobCarrollFSU@gmail.com

Research Interests:
• International relations
• Formal models
• Methodology

I develop general equilibrium models of international relations, including both economic and military factors.

How a Collaborator Could Help Me:
Finding new applications for my theoretical work, along with computational skills for empirical extensions.

How I Could Help a Collaborator:
Creativity, unexpected questions, and curiosity.
Research Interests:
• Oral history
• Globalization and Transnationalism studies
• Experimental performance-making

My performance practice, scholarship and teaching lie in the intersection of oral history, postcolonial studies, ethnomusicology, transcultural theatre and performance, experimental devised performances and community-based performance-making.

How a Collaborator Could Help Me:
I am always seeking to understand performance practices through interdisciplinary studies, and also through embodiment of theories that support my research. A lot of my performance practices depend on oral history projects, and storytelling projects. I am looking to collaborate with historians, filmmakers, musicians, dancers, economists and sociologists to understand and embody theories of immigration, nationalism, postcolonialism and globalization.

How I Could Help a Collaborator:
I am an artist-scholar, and I do research in both embodied practices as well as theatre histories and performance theories. I wish to apply my research, practice and scholarship in interdisciplinary projects. I am happy to collaborate with anyone whose research would benefit from my scholarship and practice.
Research Interests:
• High voltage engineering
• Cryogenics
• Electrical properties of materials

My current research focuses on the insulation design for superconducting power cables. The insulation design must be compatible with cryogenic temperatures as well as high electrical fields.

How a Collaborator Could Help Me:
There is only select materials which are compatible with cryogenic temperatures. We are always on the lookout for new materials to characterize electrical and mechanical properties at cryogenic temperatures.

How I Could Help a Collaborator:
In my current position I manage the high voltage laboratory at the Center for Advanced Power Systems. There is potential to perform a variety of electrical measurements up to 100 kV AC and 140 kV DC at both room and cryogenic temperatures.
Research Interests:
• Chemistry
• Materials
• Environmental

Applications of NMR in wide range of fields, such as: chemistry, biology, material science, medicine, petroleum industry, and environmental study, etc.

How a Collaborator Could Help Me:
Researchers with diverse interests will provide many interesting studying systems.

How I Could Help a Collaborator:
NMR is widely needed in many research fields. We have very strong NMR facility that can meet the diverse needs of active researchers.
Research Interests:
• Experiments in quantum control
• Quantum coherence
• Quantum materials

Development of superconducting chip able to control and detect spin qubits localized in mesoscopic samples.

How a Collaborator Could Help Me:
Simulation and theoretical calculations on the behavior of coherent states under controlled electro-magnetic environment.

How I Could Help a Collaborator:
Provide experimental platform to test optimization of control sequences, study new spin qubits.
Research Interests:

- Infrastructure planning in terms of sustainability and resilience
- Demolition planning
- System-of-systems

My research efforts are been dedicated to understanding how different infrastructure systems affect community functioning during post-disaster recovery. It is important to understand the roles played by multiple domains of critical infrastructure systems (i.e., civil, civic, social, cyber, educational, environmental, and financial system) to meet recovery needs and make a coordinated plan between them. My research helps to collectively evaluate capacity needs of these multiple systems/sectors and make an effective coordinated plan to achieve a feasible resilience.

How a Collaborator Could Help Me:

In past research, I proposed a seven-layer classification for systems critical to community resilience (i.e., civil, civic, social, environmental, educational, financial, and cyber layer) and developed a methodology to analyze capacity needs. The proposed framework requires further validation by different infrastructure sectors. Interdisciplinary collaboration with diverse researchers may refine the framework and help it better reflect their context. The discussion can lead to more economically-viable, sustainable solutions.

How I Could Help a Collaborator:

During post-disaster recovery, civil infrastructure systems (e.g., electricity, water, road) play an important role in supporting post-disaster functions of other infrastructure systems (e.g., NGOs’[social system] humanitarian activities, hospitals’ medical operations [civic system]). With the adequate and reliable supply of such lifeline services, non-civil infrastructure (e.g., social, civic, cyber, educational, environmental, financial systems) is able to address disaster-related social and environmental issues. In this way, my expertise (i.e., civil infrastructure planning) can help other researchers address the issues within their domain. Also, I developed a platform where different infrastructure sectors and systems can collectively identify capacity needs to achieve a desired level of community resilience and prioritize them for improvement.
Research Interests:
• Health Communication
• Media Psychology
• Psychophysiology

I am interested in studying audiences’ cognitive, emotional, and behavioral responses to mediated messages.

How a Collaborator Could Help Me:
Collaboration could occur from those interested in message design, data analysis, implementation, and grant writing.

How I Could Help a Collaborator:
I am able to measure cognitive and emotional responses via psychophysiological measures to all forms of mediated content.
Sabrina Dickey
College of Nursing
sldickey@fsu.edu

Research Interests:
• Cancer communication
• Minority Health Disparities
• Quality of life among cancer survivors

Prostate cancer is my primary area of research. I am interested in the development of culturally tailored interventions to improve cancer communication and quality of life among cancer survivors and their families. The use of biochemical markers to examine quality of life and stress along with measures of cognitive functions among cancer survivors is a pertinent aspect in my field of research. Research in the health disparities experienced by minorities which is focused on increasing awareness, education, and preventative screening behaviors is a priority in my research.

How a Collaborator Could Help Me:
A collaboration can foster research in cognitive functions, culturally tailored interventions to improve cancer communications, quality of life, and chronic stress among cancer survivors.

How I Could Help a Collaborator:
A collaboration can foster research in cognitive functions, culturally tailored interventions to improve cancer communications, quality of life, and chronic stress among cancer survivors.
Research Interests:
• The Intersection between Sport Management and Public Health

My research focuses on the impact of eSport on mental health outcomes.

How a Collaborator Could Help Me:
Seek expertise in medical or action research targeting mental health.

How I Could Help a Collaborator:
I specialize in consumer behavior and psychology as well as a repertoire of experimental designs and statistical methods.
Research Interests:
- The psychology of:
  - Skill acquisition
  - Skilled and expert individual and team performance
  - Human performance under stress

My current research explores understanding the developmental pathways to skilled and expert human performance in stressful professional and personal domains.

How a Collaborator Could Help Me:

Collaborators can help me apply my research approach and methods to understand the developmental pathways to skilled and expert human performance in their domain, whether it be emergency medicine, law enforcement, high-level sports, hurricane forecasting, military command and control, or any another professional arena.

How I Could Help a Collaborator:

I can help collaborators better understand and in turn enhance individual and team performance in their professional or personal domain.
Research Interests:
- Acoustic ecology
- Sound studies
- Audible history

My research program centers on the reconstruction, recording, and composition of environmental, religious, and social soundscapes. I am particularly interested in sound mapping, sound recording, and electroacoustic composition.

How a Collaborator Could Help Me:
I am interested in working with collaborators who employ sound as a research process or a research tool, or who would benefit from adding sound to their research. I would welcome the chance to work with collaborators from scientific or humanities disciplines.

How I Could Help a Collaborator:
I could assist in the creation of digital or spatial humanities projects involving sound for the purpose of conducting or disseminating research.
Debi Fadool  
Department of Biological Science  

dfadool@bio.fsu.edu

Research Interests:
• Obesity
• Ion channel modulation
• Olfaction

I am interested in the olfactory system as a sensor of metabolism. I use biophysical, biochemical, behavioral, and molecular approaches to understand how the nervous system is affected by excess energy consumption leading to diet-induced obesity.

How a Collaborator Could Help Me:

We are initiating viral intracranial injections and design of crispr cas9 genetic engineering - would be wonderful to have further expertise in this realm.

How I Could Help a Collaborator:

We can electrophysiologically characterize neurons (brain slice or optogenetics) or the function of peptides to modulate ion channels. We can metabolically profile mice/rats for systems physiology parameters (ingestive behavior, energy consumption, locomotor activity) or quantify voluntary running activity. We can measure olfactory or reversal learning ability (olfactometer). We are well versed in immunocytochemical and biochemical procedures (protein biochemistry/protein-protein interactions).
Research Interests:
• Genetics
• Developmental Biology
• Neural Degeneration

Our broad goals are to uncover new genes and novel genes function essential for the development of the eye and underlying degenerative disease of the visual system. We take advantage of the oft cited benefits of the zebrafish as a genetic model of vertebrate development and human disease to specifically investigate the specification, patterning and degeneration of the rod and cone photoreceptor, the light sensing cells in the back of our eyes.

How a Collaborator Could Help Me:
Adapting high throughput or single cell sequencing tools, proteomics, computational approaches and bioinformatics to understand gene expression changes and chromatin dynamics in our model systems.

How I Could Help a Collaborator:
We can provide expertise to help you or your trainees take advantage of the power of zebrafish genetics as a novel in vivo approach to answer basic biological questions or as models of human disease. We will work with collaborators interested in applying genome editing tools to generate precisely defined genetic models of inherited disorders in any organ system. We can help generate transgenic lines expressing fluorescent reporter genes to track an array of dynamic cellular processes and assist your staff to take full advantage of available imaging resources on campus.
Research Interests:
- Literacy disorders
- Speech and language development
- Children in poverty/ low income/ homelessness

I use behavioral and observational learning paradigms to study school-aged children with varying levels of language use or understanding and how they are able to learn within an educational setting in order to improve early identification and treatment of developmental or acquired language disorders and reduce risk of reading disabilities.

How a Collaborator Could Help Me:
I really need guidance and assistance in grant writing. I have been successful so far with my publication record, but I have yet to be successful securing even small foundation grants. I could use a collaborator who has insight into the best funding mechanisms as well as overall guidance for grant writing tips and practice.

How I Could Help a Collaborator:
I am a speech-language pathologist by training, so my insights into research often focus on the “so what” applicability of the work for practicing clinicians. Particularly for those working in public schools. I have experience in examining how policy influences practices and service provision for children who have special education needs. I also have years of clinical experience with children between the ages of birth to 21 who have a variety of language-based communication disorders and disabilities. I also enjoy writing manuscripts and interpreting data.
Research Interests:
• Mental health
• Substance abuse
• Psychotherapy

Improving the identification, treatment and outcomes for mental health and substance abuse in primary care and community settings through developing and testing interventions, as well as improving health services.

How a Collaborator Could Help Me:
I could use help with machine learning and computer science models for health data aggregation.

How I Could Help a Collaborator:
I could contribute to project proposals that require any mental health content expertise and working in community settings.
Research Interests:

- Personality
- Neuropsychology
- Mental health

I am investigating how different personality traits, such as fearlessness or impulsivity, influence accuracy and reaction time when handling several tasks at once, and switching between different rule sets. I use fMRI brain imaging to learn more about the mechanisms and the physiology behind fear, impulsivity, and emotion regulation. This is done in a large adolescent sample, and will allow us to identify risk factors for later substance abuse and other relevant mental health variables.

How a Collaborator Could Help Me:

We are looking for collaborators who have questions about mental health issues or personality traits that can be answered via neuropsychological and behavioral investigations, in clinical or healthy populations.

How I Could Help a Collaborator:

These investigations are part of a project funded by the Army Research Institute, studying conditions and traits that would alter the way that participants are able to handle complex or ambiguous tasks. We can help collaborators identify the mechanisms and consequences of personality traits or mental health issues, paving the way for more accurate methods to identify, diagnose, or treat the issue at hand. This is done in a multi-modal way, encompassing measurement levels as diverse as brain morphometry, neural response, startle reactivity, self-report, and task behavior.
Research Interests:
• Machine Learning
• Solar Cells

My research program centers on real-time object detection and recognition using deep learning, and high efficiency polymer solar cells.

How a Collaborator Could Help Me:
Finding new ways to solve difficult engineering problems.

How I Could Help a Collaborator:
Knowledge in machine learning and renewable energy.
Hanwei Gao
Department Physics
hgao3@fsu.edu

Research Interests:
• Materials
• Optics
• Electronics

We are interested in creating new materials and photonic nanostructures for light capturing and light emitting using combined bottom-up growth and top-down methods. By studying electronic dynamics, plasmonic behaviors and light-matter interactions in the hybrid semiconductor and metallic structures, we hope to present solutions for solar energy harvesting and nanophotonics devices that are more miniaturized, cost effective, and energy efficient.

How a Collaborator Could Help Me:
We are interested in expanding our research subjects to the field of environment, sustainability, or healthcare related subjects through collaborations.

How I Could Help a Collaborator:
We can provide structural, electrical and optical characterization capabilities to understand behaviors of materials.
Research Interests:
• Software engineering
• Computer science education
• Software for social good

My current research spans from tools and techniques to help software programmers understand and find information and errors in the source code of large software systems to leveraging multimedia information such as YouTube tutorials and online Q&A posts in order to help programmers and computer science students with their programming tasks. My research integrates approaches from the fields of Text Retrieval, Natural Language Processing, and Machine Learning.

How a Collaborator Could Help Me:
I am generally interested in applying my expertise in software engineering and computer science education to projects that benefit society and the greater good. One project I would like to pursue is designing education programs aimed at retraining inmates and the homeless population for a career in computer science.

How I Could Help a Collaborator:
Building and maintaining software systems, expertise in text retrieval, natural language processing, and machine learning.
Research Interests:
• Cognitive neuroscience
• Depression
• Anxiety

I use EEG- and fMRI-based measures to study individual differences in anxiety and depression; we are particularly interested in measures that prospectively predict risk for these disorders.

How a Collaborator Could Help Me:
New projects and directions.

How I Could Help a Collaborator:
We have solid measures of good individual differences constructs.
Research Interests:
• Nanostructured Polymer Materials
• 3D Printing Solid Lithium Batteries
• Transport in Polymer Membranes for Gas and Water Separations

We are interested in the dynamics of nanostructured polymer materials, such as block copolymers and polymer-grafted nanoparticles. The applications of most interest are polymer based electrochemical cells, such as lithium batteries, and membrane-based separations, such as water desalination and carbon dioxide capture.

How a Collaborator Could Help Me:
By supplying interesting nanostructured soft materials either for model studies or for improving applications, such as solid battery charging rate or desalination membrane selectivity.

How I Could Help a Collaborator:
We have glove boxes to study air-sensitive materials, such as those for lithium batteries. We have expertise in electrochemistry, spectroscopy, transport modeling, and use of national user facilities. To study the complex effect of structure and processing on transport and mechanical strength, we develop advanced experiments such as time-resolved spectrosopies and electrochemical techniques tailored for solid electrolytes. We also conduct time-resolved experiments at several national laboratories. Together these world-class facilities enable us to examine physics that ranges from nanoseconds on nanometer length scales to days on centimeter length scales.
Research Interests:
• Food safety
• Consumer behavior
• International food and beverage

My current research focuses on food safety, consumer behavior, food safety inspections, and the Food Safety Modernization Act.

How a Collaborator Could Help Me:
Collaborate on obtaining a grant for food safety outreach/education

How I Could Help a Collaborator:
Develop research proposals, grants, and implementation strategies
Hans Hassell
Department of Political Science
hans.hassell@fsu.edu

Research Interests:
- Representation
- Government Responsiveness
- Media

I’m currently working on projects examining the responsiveness of local public officials to citizen requests. In addition, I am also developing alternative measures of ideology of media outlets and examining how media ideology influences voter decision making.

How a Collaborator Could Help Me:
Brainstorming ideas, identifying areas of interest, discussion of research threads in other disciplines.

How I Could Help a Collaborator:
Experimental design, access to experimental populations, expertise working with non-academic collaborators.
Research Interests:
• Demography
• Climate change
• Population projections

I am a demographer and am keenly interested in any scholarly intersection with demographics. My scholarship recently focuses on 1) continuing to quantify the impacts of sea level rise on sociodemographic groups and modeling human migration responses, 2) the impacts of climate change on human longevity and life expectancy, and 3) continued development long-range population projections for climate impacts.

How a Collaborator Could Help Me:
Most of my scholarship intersects the natural or physical sciences but I am not a physical scientist. I do not conduct qualitative research, but I am interested in the application of qualitative work in the realm of my scholarship. I’d love to partner with both physical and social scientists whose research might align with my own.

How I Could Help a Collaborator:
Demographic modeling is typically a foundation for many climate impact studies. I’ve developed a set of US county-level population projections by detailed age/sex/race groups for the period 2020-2100 for use in climate impact studies (though not limited to climate impacts). I’m currently in the process of downscaling my county-level projections to Census Tract/Block Group. I’ve also created a longitudinal database of population changes at the Census Block Group scale for the period 1940-2010. And I also have cleaned a detailed dataset of county-to-county US migration data for the period 1990-2015. I tend to work rather quickly and can offer demographic analysis to a potential collaborator. Most of my work is US based but I’m open to other study areas.
Research Interests:
- Biomedical Informatics
- Clinical Research Informatics
- Data Mining and Machine Learning

My research lies in biomedical and health informatics, clinical research informatics, knowledge discovery, knowledge representation, and ontology-enhanced data analytics. The goal of my research is to improve the population health and advance biomedical research through the collection, analysis, and application of electronic health data from heterogeneous sources. Another line of our research is to bridge the terminology gap between health information consumers and health professionals through the analysis of the textual content in the online social media.

How a Collaborator Could Help Me:
A potential collaborator can help me with domain knowledge in biomedicine

How I Could Help a Collaborator:
We can provide informatics techniques, resources, and knowledge to enable large-scale data management and analytics in the biomedical domain.

At FSU, I lead the eHealth Lab. Our research has been funded by National Institutes of Health, Amazon, NVIDIA, FSU Council on Research and Creativity, and Institute for Successful Longevity.
Research Interests:

- Nutrition
- Vitamin and Mineral Metabolism
- Inflammation/infection

My laboratory investigates physiological factors that regulate mineral absorption and status. We use cell culture, small animal models, and clinical studies in humans to understand the mechanisms by which factors, such as inflammation and infection, affect mineral homeostasis and potential countermeasures to improve mineral status in healthy and diseased states.

How a Collaborator Could Help Me:

Broaden research scope and techniques with multidisciplinary collaborators.

How I Could Help a Collaborator:

Expertise in vitamin and mineral metabolism. Experience with DoD funding.
Robert Hickner

Department of Nutrition, Food and Exercise Sciences

rhickner@fsu.edu

Research Interests:

• Microcirculation
• Fat metabolism
• Exercise

My research interests are broad, but involve investigating how exercise and nutrition impact on the regulation of blood flow and metabolism in skeletal muscle and adipose tissue to improve cardiometabolic disease risk across the lifespan.

How a Collaborator Could Help Me:

Collaborators could add novel measures to our studies of human health, nutrition and fitness. We conduct intervention trials that would allow additional measures such as survey instruments or analysis of biological samples.

How I Could Help a Collaborator:

We could provide blood and tissue samples from our exercise and nutrition intervention studies that could be further studied. We also perform a novel in-vivo method (microdialysis) of sampling the interstitial fluid in muscle and adipose tissue to monitor blood flow and metabolism. We are very open to interdisciplinary collaborations.
Research Interests:
- Second and foreign language learning and instruction
- Psycho-social factors in learning and teaching
- Complex and dynamic research methods for education

My research uses mixed methods to study how teacher thought and action relates to student engagement and development in instructed language learning (i.e. Examination of the role that teacher metacognition and subjective wellbeing play in exemplary practice). I also investigate how dynamic learner factors interact with instructional contexts and contribute to individual second language development (i.e. ongoing student engagement under different instructional conditions such as frustration-inducing tasks).

How a Collaborator Could Help Me:
I would like to get involved in more intervention-based designs, work with under-represented learner populations, and explore new time-intensive and network methods of data-elicitation and analysis.

How I Could Help a Collaborator:
I can help collaborators with expertise in psycho-social factors related to learning and teaching languages. I can also assist in data analytic strategies/methods from a complex dynamic perspective including qualitative and quantitative time-series methods, case-based (set-theoretic) methods, complex structural models, qualitative and quantitative modeling methods, and cluster analysis.
Research Interests:

- Disinformation
- Cloud forensics
- Trusted human computer interaction

My research focuses on energy efficiency through superconducting power systems.

How a Collaborator Could Help Me:

I’m currently funded by Florida Center for Cybersecurity (FC2). I’m working on a few research areas including disinformation, Voip/IoT forensics (big data research for the smart city), interactions between hackers and cyber defenders, organizational security culture, information ethics, privacy, and my usual behavioral-based security research.

How I Could Help a Collaborator:

We can jointly explore specific system design, experimentation, big data processing and analysis in healthcare and forensics investigation for the smart city. I’m especially interested in writing large-scale grant proposals that tackle complex problems and use online games, a sociotechnical system design approach, to draw meaningful data.
Research Interests:

- Persuasive communication
- Wellness environments
- Emerging technology

The relationship between emerging media and persuasive communication is the cornerstone of my research program. My efforts lie in two interrelated areas: the means of communicating empirical information to working professionals and emerging media use in the acquisition of design talent. I also teach a senior design studio that is dedicated to health and well-being.

How a Collaborator Could Help Me:

I am seeking to collaborate on research where the built environment serves as an antecedent to human wellness. I am also in the process of developing research dissemination documents using augmented reality applications, multi-level web links, and short-form, non-linear videos. These sources will then be used to ascertain viewer preferences against their levels of information comprehension. I am also probing the decision-making strategies of designers, specifically the influence of heuristics and biases in their design process and on their judgments of information relevance.

How I Could Help a Collaborator:

Prior to academia I was a corporate designer for a global architecture and design firm and have retained many skills relating to design communication. I am well-versed in 3D dimensional modeling and computer visualization tactics for buildings and interior environments, I'm current with SPSS and multiple graphic design and video editing programs, and can offer assistance in literature reviews and editing. I also maintain a list of resources connecting information-processing preferences, information-seeking behaviors, and research utilization strategies to areas of economics, graphic design, marketing, advertising, sociology, psychology, literature, neuroscience, and environmental design.
Roxanne Hughes
National High Magnetic Field Laboratory

hughes@magnet.fsu.edu

Research Interests:

• Building the STEM workforce
• STEM identity
• Improving the STEM climate

I am interested in understanding what attracts/retains vs repels/forces out underrepresented students in STEM disciplines. The constant thread that holds my research together is the concept of identity and how individuals identify with STEM. I have a particular interest in research programs that attempt to improve STEM identities beginning in middle school and through high school, as this is a crucial age where youth develop their identities, values and goals.

How a Collaborator Could Help Me:

As a researcher interested in how STEM disciplines attract and retained versus repel underrepresented minorities, I am very interested in how different disciplines address this. Collaborators from multiple disciplines could help my research because I would be able to (1) see which fields are addressing the issues of climate and underrepresentation; (2) how they are accomplishing this task; and (3) how their successes can be replicated in other fields.

How I Could Help a Collaborator:

Most STEM fields realize the importance of diversity for innovation and cutting edge research. Any scientists or engineers who are writing grants would benefit from an understanding of how their science and the climate of their department/field can improve the inclusion and support of all members, particularly those who are isolated or marginalized by their minority status. I can provide this expertise as a colleague on a grant.
Research Interests:

- Education policy (secondary ed, transition to higher ed)
- Inequality
- Urban

In my current area of research, I investigate the impact of state and local policy and practices on students course taking in high school, particularly with respect to advanced courses. I'm also interested in how we can better shape students (and families) decisions on coursetaking.

How a Collaborator Could Help Me:

A potential collaborator may be able to help me in broadening my perspective to include community and social factors that may also be contributing to the problem of lack of preparedness for postsecondary education. In addition, someone with experience in experimental decisions and knowledge of behavioral theories (economics, psychology) could expand my work and make it more action oriented.

How I Could Help a Collaborator:

In turn, I can help a potential collaborator with my deep understanding of school systems and educational policy and practice. Potentially, I could help them access microlevel education data.
Research Interests:

• Public goods (e.g. free riding in alliances in Minerva area 3)
• Auctions
• Land acquisition

I am currently working on proposals in these areas.

How a Collaborator Could Help Me:

I would like advice on how to obtain funding through additional governmental funding sources. The only federal mission agency I’ve directly had experience with is DOE. I have had one grant funded by DOD, but this was run through RAND. I’m not a person that easily thinks like or talks like a government employee in a mission agency.

How I Could Help a Collaborator:

I’m a very good experimental economist, and as a former Department Chair I can organize budgets, etc.
Research Interests:

• How making things/objects can create meaningful relationships
• Space and how it impacts on our well-being

I am very interested in making connections for audiences through art and curatorial practices; in how we become an expert in a process of making and thinking; and in attempting to understand the wider contexts for audiences through art-making.

How a Collaborator Could Help Me:

Collaborators from any discipline interested in how we create meaning through display, through a variety of modes for communication, would be exciting to work with on projects, grants etc.

How I Could Help a Collaborator:

I will help in any way I can - as a person to bounce ideas off or with.
Research Interests:
• Cancer and treatment-related neurocognitive dysfunction
• Chronic diseases, brain structural and cognitive dysfunction
• Measurement development and psychometric validation

I am especially interested in 1) understanding the underlying neurobiological and neuropsychological mechanisms involved in cancer and treatment-related neurocognitive dysfunction (CRND); 2) developing and testing reliable methods to facilitate diagnosis, optimal care, and successful neurocognitive rehabilitation; 3) understanding brain plasticity and changes that accompany recovery of neurocognitive functioning in the context of cancer and its treatments; and 4) developing and testing behavioral and pharmacological interventions to treat CRND and other biobehavioral adverse effects (e.g., fatigue, psychological distress).

How a Collaborator Could Help Me:
Expertise in multidisciplinary clinical translational research (e.g., nursing, statistics/biostatistics, basic and behavioral sciences, diet and nutrition) will be a welcome addition to my developing research team.

How I Could Help a Collaborator:
We are currently implementing descriptive and clinical studies on the impact of chronic diseases and cancer on brain structures and neurocognitive functioning. We are also assessing/controlling for other bio-behavioral adverse effects and various blood biomarkers. We can provide opportunities to address mutual research questions within a translational bio-behavioral context.
Research Interests:
- Bullying
- Youth mental health
- Bystander behavior

Given the negative outcomes and the risks to youth, the goal of my research is to reduce and prevent maladaptive peer interactions. I engage in research projects that (a) identify/understand youth in different bullying roles (e.g., bully, victim, assistant, defender, outsider); (b) investigate the role that peers and adults play in preventing or intervening in bullying; (c) develop psychometrically sound tools to assess bullying and bystander behaviors, and ultimately; (d) use this information to create and implement bullying prevention programs based on the social-ecological model and prevention science.

How a Collaborator Could Help Me:
Potential collaborators in this line of research can help to conceptualize bullying prevention from a variety of perspectives, including sociological, developmental, psychological, educational, and ecological frameworks. An interdisciplinary approach is needed when studying bullying because bullying do not exist solely as an interaction between the bully and victim. Parents, teachers, administrators, and peers are all involved in bullying to some degree and their behaviors can thwart or exacerbate bullying. Additionally, given the complex set of variables that are needed to understand and prevent bullying, collaborators with varied statistical and methodological expertise are needed.

How I Could Help a Collaborator:
My doctoral training is in psychology, with an emphasis on school psychology and developmental psychology. With this background, I have understand youth with and without disabilities, school systems, working with parents and teachers, as well as prevention and intervention programs. Though my research is currently focused on bullying and bystander behavior, I have broader interests in youth mental health, social emotional learning, and prevention of social, emotional, behavioral, and academic difficulties. I think by clinical training combined with my research expertise could be valuable for other researchers doing research related to prevention and youth mental health, particularly in school settings.
Research Interests:
• Building interpersonal relationships
• Verbal aggression
• Instructional communication and student learning

My area is broadly interpersonal communication. I study trait and demographic variables that moderate or affect our perceptions of self and others leading us to either pursue or avoid building relationships. More specifically, I am studying how verbal aggression (trait) is perceived when enacted by males and females who are Black, White, Hispanic, or Asian.

How a Collaborator Could Help Me:

A potential collaborator could help me to expand the demographics of the participants and go beyond my examination comparing perceptions of individuals of various ethnic groups. I would like to collaborate with others who may have ideas as to how we can identify and train others who are verbally aggressive (destructive form of verbal aggression) to be more argumentative (constructive form of verbal aggression). A collaborator could help develop and facilitate training and ultimately expand to community outreach (parents, police officers, couples, teachers, etc).

How I Could Help a Collaborator:

This could be the start of new research area for a developing scholar looking to expand their current research. The obvious collaborator may be scholars from education, sociology, or psychology, etc. But this line could also be helpful to someone looking to add a new dimension to their research from the areas of criminology or medicine.
Research Interests:
• Economics of innovation
• Technology diffusion
• Economic growth and development

My current research explores the economic impacts of Space Race and Cold War technological developments. The research focuses on the mechanisms by which knowledge diffuses to local economic actors and a measurement of the resulting impact on regional economies.

How a Collaborator Could Help Me:

My research is decidedly targeted toward an economics audience. Unfortunately, I am not a scientist or an engineer, so some of the nuances of the technological discoveries of the Cold War era may be lost on the economic researcher. My research would benefit from a partnership with a scientist or engineer who can put the technological discoveries of the Cold War into their proper perspective in terms of future civilian and military developments.

How I Could Help a Collaborator:

To the extent that a colleague in the sciences, engineering, or history wishes to explore the broader societal impacts of military spending, especially pertaining to knowledge diffusion and regional economic development, I look forward to exploring a potential collaboration.
Fengfeng Ke

Department of Educational Psychology and Learning Systems

fke@fsu.edu

Research Interests:
• Digital game-based learning
• Simulation and immersive learning for STEM
• Mixed reality

How a Collaborator Could Help Me:

How I Could Help a Collaborator:
Research Interests:
• Cyber-Physical Systems Security
• Power Systems Resilience and Control

My research area focuses on all aspects of cyber-physical and embedded systems security with particular focus on smart grid technologies.

How a Collaborator Could Help Me:
Interdisciplinary projects in the field of cybersecurity.

How I Could Help a Collaborator:
Expertise in all layers of industrial control systems security with specific applications to power systems.
Research Interests:
• Nanotechnology
• Synthetic biology
• Drug discovery

My lab seeks to recreate the cellular function of life synthetically using microscopic lipid droplets on surfaces. Applications include high-throughput screening for drug discovery and biosensor arrays for environmental monitoring and medical diagnostics.

How a Collaborator Could Help Me:
I’m looking for cell-based assays that are compatible with our miniaturized high throughput screening technology.

How I Could Help a Collaborator:
We can provide high throughput screening microarrays suitable for screening small molecules for their effects on cells, e.g. to identify drugs or nanomaterials that activate or inhibit certain pathways.
Research Interests:
• Traumatic Brain Injury (TBI)
• Concussion

Treatment and prevention of TBI-associated depression; effects of repetitive concussion; mild TBI-ADHD interactions

How a Collaborator Could Help Me:
We are interested in extending our findings to clinical populations.

How I Could Help a Collaborator:
We can help applied scientists investigate mechanisms responsible for neuropsychological changes
Lichun Li

Industrial and Manufacturing Engineering

lichunli@eng.famu.fsu.edu

Research Interests:
• Game theory
• Control theory
• Cyber-human-physical systems

We use Dynamic Bayesian Games and Partially Observable Markov Decision Processes to model and address security and risk control problems in extreme events and adversarial environments.

How a Collaborator Could Help Me:
Because of the huge amount of uncertainties in the model, specialist in AI can help me learn the key unknown factors in an efficient way. Besides, our systems interact with human a lot, to understand and model human behavior will also enhance our projects.

How I Could Help a Collaborator:
With the expertise in game theory and control theory, I can provide strategic suggestions on how to dealing with purposely biased data, and on how to defend yourselves against advanced persistent threats.
Richard Liang

High Performance Materials Institute

zliang@fsu.edu

Research Interests:
• Data-driven manufacturing
• Nanosensors and multifunctional materials/devices
• Structural composites and nanocomposites

DoD, NSF and NASA related high-strength nanocomposites and additive manufacturing of advanced sensors and devices.

How a Collaborator Could Help Me:
Need to collaborate with data-science and modeling experts

How I Could Help a Collaborator:
Discussion and lab visits
Research Interests:
- Deep learning
- Natural language processing
- Reinforcement learning

Our goal is to obtain new solutions with unprecedented performance using bootstrapping-based algorithms for continuous self-improvement. With available LandSat images, we have improved the land cover classification accuracy substantially; by learning new vector representations for words to better capture semantic meanings, we could improve the abilities of programs to understand natural languages. We are also exploring new algorithms for data center interconnection designs, protein folding, bioinformatics, and emerging applications.

How a Collaborator Could Help Me:

Deep and reinforcement learning techniques have surpassed human performance in speech recognition, object recognition, and complex problem solving capabilities and are changing many areas. I hope that the collaborators can help my group identify challenging problems in their areas so that we together can develop new solutions that could lead to breakthroughs.

How I Could Help a Collaborator:

My group is looking for challenging problems with high impacts where deep learning techniques could make a big difference. By working together with experts in other fields, we might be able to formulate new deep learning based solutions, get much more effective solutions, and advance the field(s) significantly.
Research Interests:
- Aphasia
- Reading
- Communication disorders

My research is focused on understanding language processing in aphasia, an acquired language disorder, and evaluating the effectiveness of behavioral treatment approaches that aim to improve spoken and written communication abilities for individuals with aphasia.

How a Collaborator Could Help Me:
Collaborators can help me by sharing methodologies used when working with individuals with communication disorders (and their caregivers) and working together to design studies aimed to understand and improve overall communication and quality of life for individuals with communication disorders.

How I Could Help a Collaborator:
I can contribute assessment and intervention techniques for working with individuals with acquired communication disorders.
Iskandaria Masduki

Center for Information Management & Educational Services

imasduki@fsu.edu

Research Interests:
• Competency research
• Evidence-based assessment
• Learning and cognition

Developmental program evaluation

How a Collaborator Could Help Me:
I’m looking for subject matter experts with funding that have a need for the development of interactive learning/outreach materials and information system for data collection.

How I Could Help a Collaborator:
I can conduct program evaluation for innovative new programs, design and develop learning products and outreach materials, identify information needs and develop information systems.
Research Interests:
• Marine biology
• Biogenic minerals
• Pollution and climate

I focus on links between physiological response and dynamics of populations and communities, and especially on the effects of environmental stress on traits that mediate species interactions. How does stress differentially affect communities, populations, and organisms? This takes me from traditional community ecology to physiological processes including carbon use in marine plants and skeletal geochemistry of shellfish.

How a Collaborator Could Help Me:
I am very open to various kinds of collaborations. Examples could include: a social scientist who could provide assessments of societal or economic impacts of local shellfish industries linked to my eco physiological work, an engineer interested in photosynthetic pathways in aquatic plants, a computer scientist looking to model applied ecological processes, or a materials scientist who could provide new analytical tools to examine biogenic minerals.

How I Could Help a Collaborator:
My own research is interdisciplinary, so I could assist a collaborator in multiple ways, providing theoretical frameworks or expertise with analytical tools. Examples could include: conducting ecological impact assessments marine infrastructure or regulations, providing an ecological framework for microbial community analysis (i.e. human or surface microbiomes), using archival or fossil biogenic materials for (paleo)climate reconstructions, conducting ecophysiological stress response measurements on plants or marine invertebrates, or helping to develop an experimental design. I’m also interested in participating in diverse student committees across disciplines.
Research Interests:
• Cognitive Aging
• Memory
• Precision Health

My research includes behavioral, functional and neuropsychological changes associated with the aging brain on memory, executive function, and functional ability. Senior WISE (Wisdom Is Simply Exploration WISE), an efficacy-based treatment was developed and tested to treat adults worried about subjective and objective memory loss and improve their memory performance, memory, and instrumental activities of daily living. My research has emphasized health disparities in diverse samples of Caucasians, African and Hispanic Americans.

How a Collaborator Could Help Me:
Expand the model of research to enhance the outcomes of the studies. The possibility of expanding to chronic illness with biomarkers as outcomes would be an addition to the neuropsychological components.

How I Could Help a Collaborator:
I have twenty-five years of a successful research career in Cognitive Aging and Psychosocial Interventions based on 4 funded NIH projects. My research received over $3 million in research funding as the PI of 15 studies, four funded by NIA, NIMH, and NINR twice. An additional $3 Million of joint funding was acquired in collaboration with faculty colleagues at The University of Texas at Austin School of Nursing, where I was actively engaged in the implementation and co-leadership of the P30 Center for Underserved Populations funded for ten years by NINR.
Research Interests:

• Terror management theory
• Crisis/risk communication
• Teaching abroad

I am focusing on the contingent conditions of terror management theory and whether this framework has limits dependent on countries, topics, and even methodologically.

How a Collaborator Could Help Me:

A potential collaborator could help me by identifying other theories in psychology that could strengthen the understanding. In crisis/risk communication, collaboration could come from specific analyses of case studies and/or review of specific topics.

How I Could Help a Collaborator:

I would be able to help a collaborator with some methodological aspects of their work, as well as add communication variables to their studies that may help them explain further what they are reviewing.
Research Interests:
• Brain and cancer research
• Radiomics/radiogenomics prostate cancer
• Alzheimer research

I am working in medical imaging with emphasis on cancer detection/diagnosis/therapy. Also in neurodegenerative disease evolution based on dynamic graph networks.

How a Collaborator Could Help Me:
Provide experimental data and interest for interdisciplinary research.

How I Could Help a Collaborator:
Analyze data and develop models.
Research Interests:
• fMRI,
• Transcranial magnetic stimulation
• Cognitive control

I use neuroimaging (fMRI) and brain stimulation (transcranial magnetic stimulation; TMS) to examine the neurobiological basis of working memory and cognitive control. These abilities allow us to maintain and manipulate information in mind and use it to guide intentional, goal-directed cognition.

How a Collaborator Could Help Me:

Collaborators with expertise and access to clinical populations would be a strong complement to my basic science research. Collaborators with expertise in computational modeling would facilitate understanding and prediction using the large data throughput of neuroimaging. Collaborators that have developed immersive or gaming environments and/or those that have developed cognitive measures applicable to real world performance would facilitate scaling up the laboratory task measures I utilize.

How I Could Help a Collaborator:

I can facilitate cognitive measurement using computer-based experimental tasks. I can facilitate neural measurement using fMRI. I can facilitate causal manipulations of brain function and its impact on the above through TMS.
Research Interests:
• Genetics
• Neuroscience

Male vs female gene expression in the brain.

How a Collaborator Could Help Me:
Good statistics and good models.

How I Could Help a Collaborator:
Good data
William Oates
Department of Mechanical Engineering
woates@fsu.edu

Research Interests:
- Quantum computing
- Artificial intelligence
- Multifunctional materials

My research is focused on conventional and quantum machine learning, uncertainty analysis, and physics based modeling to design advanced systems and structures that adaptive to their environment.

How a Collaborator Could Help Me:
Hypersonic characterization of adaptive structures, quantum computing algorithm development, causal inference

How I Could Help a Collaborator:
Novel algorithms that combine multiphysics models across scales with Bayesian uncertainty analysis using conventional and quantum computing methods.
Eren Ozguven
Department of Civil and Environmental Engineering
eozguven@eng.famu.fsu.edu

Research Interests:
• Emergency logistics
• Amart cities
• Intelligent mobility

My general research interests include emergency transportation operations, modeling of transportation networks, transportation accessibility and safety, connected vehicles, intelligent transportation systems, smart cities and urban mobility.

How a Collaborator Could Help Me:
Human factors and community-focused research can supplement my research

How I Could Help a Collaborator:
Technical data analysis, transportation accessibility and safety, traffic modeling and simulation
Jill Pable
Department of Interior Architecture & Design
jpable@fsu.edu

Research Interests:
• Homelessness
• Built environment
• Environmental psychology

I am seeking to identify and verify fundamental human needs for persons experiencing homelessness related to built environment. Confirming this information will lead to the creation of recommendations for built environmental design that assists people's recovery effectively.

How a Collaborator Could Help Me:
I seek experts in allied fields that can help verify this information, viewed through the lens of their special knowledge including social work, psychology, art, and similar areas.

How I Could Help a Collaborator:
This information could potentially assist similar studies that emerge from allied fields.
Research Interests:
• Family effects of autism
• Integrative care and family therapy
• Physiology and personal relationships

Evaluating the effectiveness of family therapy interventions that address the presenting problems of families affected by ASD (i.e., mental, physical, and relational). Adapting existing treatment approaches to the specific needs of families of children with ASD to implement in a collaborative/integrative care setting.

How a Collaborator Could Help Me:
Collaborators with an affiliation to established autism service providers and open to family intervention/treatment services.

How I Could Help a Collaborator:
Experience as a researcher and provider of family therapy to families of autistic children, particularly in medical settings. Interest in collecting and analyzing data on interdependence among families and couples.
Research Interests:
- Exercise science
- Cardiovascular risk factors
- Inflammatory disease

Interest in cardiac and vascular cell membrane remodeling in cardiovascular disease processes

How a Collaborator Could Help Me:
Potential collaborations could bring additional expertise to answer existing questions in my field

How I Could Help a Collaborator:
I can provide cardiac expertise to collaborative projects that show potential cardiac involvement.
Christopher Patrick

Department of Psychology
cpatrick@psy.fsu.edu

Research Interests:
• Psychological assessment
• Neurophysiology
• Mental health and adaptive performance

My research focuses on developing new procedures for assessing biobehavioral traits relevant to mental health and adaptive performance. These new procedures, termed cross-domain or neuroclinical assessment protocols, integrate neurophysiological and task-behavioral measures with report-based measures. We have also worked on neuroclinical assessments for threat sensitivity, reward sensitivity, and affiliative capacity (empathic concern vs. callousness).

How a Collaborator Could Help Me:

Collaborators could be especially helpful for: (a) providing specialized methodological (e.g., statistical-quantitative or technological) knowledge/skills, and (b) facilitating links with industry.

How I Could Help a Collaborator:

I have extensive knowledge and research skills in areas of psychological assessment, neurophysiological measurement, and mental health/illness.
George Pesta
College of Criminology & Criminal Justice
gpesta@fsu.edu

Research Interests:
• All areas in criminology and criminal justice

I am the Director of the Center for Criminology and Public Policy Research. As such, I am interested in collaborating on research in numerous areas of the field (i.e., corrections, juvenile justice, courts, schools and delinquency, mental health and criminal justice).

How a Collaborator Could Help Me:
Interdisciplinary research (i.e., health and criminal justice, mental health and criminal justice).

How I Could Help a Collaborator:
I can work with numerous faculty in the College of Criminology and Criminal Justice. We have great relationships with state criminal justice agencies.
Research Interests:
• Criminal justice
• Behavioral health
• Technological applications for treatment interventions

Develop and test clinical interventions and policy strategies for those involved in the criminal justice system.

How a Collaborator Could Help Me:
Multidisciplinary expertise

How I Could Help a Collaborator:
Intervention development, behavioral health, applied criminal justice research, research center team.
Research Interests:
• Psychological Trauma
• Emotion Regulation
• Sleep Disruption

My research aims to: 1) investigate the consequences of trauma exposure and the mechanisms that may promote or hinder recovery, 2) examine how emotional contexts and emotion regulation impact social problems, and 3) examine how emotional contexts and emotion regulation impact mental and physical health.

How a Collaborator Could Help Me:
As a new faculty as FSU, I have limited connections at this time to collect data from community or clinical samples. It would be helpful to find collaborators with these connections. I would also welcome collaborators that can assist with advanced or unique technology to collect data or to disseminate behavioral interventions.

How I Could Help a Collaborator:
I am a clinical psychologist with training in a variety of psychotherapy theories and modalities. I can also offer assistance with behavioral and health research methodology and I have expertise in the psychological consequences of trauma, including the impact of trauma exposure on emotional processes and sleep.
Qinchun Rao
Department of Nutrition, Food and Exercise Sciences
qrao@fsu.edu

Research Interests:
• Food Safety
• Food Quality
• Food Nanotechnology

My research interests lie in utilizing food chemistry, especially immunochemistry and physicochemistry, as a tool to answer questions arising in both food safety and quality disciplines. My food safety research primarily focuses on the development of rapid methods for the detection of harmful or prohibited substances in foods. My food quality research primarily focuses on studying 1) the fundamental mechanisms and external factors influencing the interactions of proteins and other ingredients; and 2) the bioavailability of nutrients and bioactive components in foods.

How a Collaborator Could Help Me:
1) Characterization of nanomaterials;
2) Advanced instrumental analysis;
3) Study of food allergy;
4) Food analysis using in vivo approaches.

How I Could Help a Collaborator:
1) Antibody development and characterization;
2) Immunoassay development;
3) Food analysis using in vitro approaches.
Chet Ray

Department of Nutrition, Food and Exercise Sciences

caray@fsu.edu

Research Interests:
• Physiology
• Cardiovascular
• Stress

The effects of physical and mental stress on the sympathetic nervous system.

How a Collaborator Could Help Me:
Help in the recruitment of a certain population.

How I Could Help a Collaborator:
I can provide unique data from sympathetic nerve activity in humans.
Research Interests:
• Health
• Addiction
• Criminal Justice

My research is at the intersection of environmental and energy policy, technology policy, and policy implementation through cross-sectoral collaboration in the context of global climate change and sustainability.

How a Collaborator Could Help Me:
Open avenues for interdisciplinary collaboration, strengthen my work in health and well-being, bringing in more innovative study design, and networking in the community and agencies

How I Could Help a Collaborator:
I have a strong history of team-based science, I’work within multiple states in projects which opens up avenues for collaboration, and I am new to area so have a fresh perspective on FSU and related opportunities.
Research Interests:
• Synthetic Biology
• Cell-based Diagnostics and Therapeutics
• Computer-aided Design and Engineering

I am pursuing the three following projects. The use of peptides to activate gene expression in engineered cells. Particle-based simulations of engineered cells and the environment where the cells operate. Coupling of plasma and biological reactors in series or parallel for processing of water pollutants that are difficult to degrade.

How a Collaborator Could Help Me:
My three projects are being pursued in collaboration with other investigators in the Colleges of Medicine and Engineering. The particle-based simulations project can benefit from expertise in applied mathematics, scientific computing, and computer science.

How I Could Help a Collaborator:
In the existing collaborations, I provide expertise in synthetic biology. It is reasonable that I can make similar contributions to other projects.
Research Interests:
• Artificial Intelligence
• Fuzzy Systems

Various: AI and fuzzy, but not restricted to these. I currently have a software development project with the US Navy, building a new message traffic system.

How a Collaborator Could Help Me:

How I Could Help a Collaborator:
Research Interests:
• Stress
• Aging and health
• Childhood adversity

I’m interested in understanding how stress influences health across the lifespan. I’m particularly interested in the effects of early adversity on health and the development of interventions for reducing the negative effects of stress throughout the life course.

How a Collaborator Could Help Me:

The highest need older adults tend to require interdisciplinary care to truly make a difference. Older adults often have complex medical, social, and psychological/cognitive problems. Interdisciplinary collaborators may be most effective in developing cutting edge interventions and assessments for

How I Could Help a Collaborator:

I have expertise in stress and aging processes. I also have expertise in the neuropsychological assessment of dementia and in administering empirically supported treatments across psychological disorders.
Kourosh Shoele

Department of Mechanical Engineering

kshoele@fsu.edu

Research Interests:
• Computational Mechanics
• Bio-inspired Engineering
• Renewable Energy

My research interest is studying multiphysics phenomena at the interface between the fluid and solid structures with an emphasis on its applications in healthcare, and energy. I look at different biological and engineering problems using a number of techniques, from the application of analytical techniques to the development of novel and powerful numerical methods.

How a Collaborator Could Help Me:

Looking for synergies between my research and other groups in Florida State University to create a long-term research collaboration. Our numerical and theoretical techniques can benefit and be benefited from collaboration with other groups at FSU.

How I Could Help a Collaborator:

Our research can help other groups to dissect the causal mechanisms of their problems and extract physics-based models for their processes.
Theo Siegrist
Department of Chemical and Biomedical Engineering
tsiegrist@fsu.edu

Research Interests:
• Materials Science
• Materials under extreme conditions
• Structure-property relationships

Research in quantum materials, such as Dirac and Weyl semimetals, highly frustrated systems based in spin 1/2 Heisenberg magnets, and quantum spin liquids based on BEDT-TTF organic materials. Work on exotic superconductors based on niobium and tantalum chalcogenides.
Single crystal growth of novel materials.

How a Collaborator Could Help Me:
Learn about problems that DOD is interested in solving.
Materials performance under extreme conditions, multifunctional materials.

How I Could Help a Collaborator:
Expertise in materials under extreme conditions, synthesis and characterization of novel materials, in-situ studies of structural phase transitions.
Research Interests:

• Magnetism
• Lighting
• Biomedical

My research focuses on the development, understanding and integration of materials at the nanoscale for applications ranging from device technology (magnet, lighting) to biomedical/biophysical imaging and therapeutics applications.

How a Collaborator Could Help Me:

Understanding the biological problems that could be addressed through a team project by non-viral nano-based transfection methods to knock-in or out genetic expression in cells would be greatly beneficial.

How I Could Help a Collaborator:

My group has 20+ years in design of optical, magnetic, and metallic nanostructures that are readily modified by biological molecules to induce gene expression or knock-out expression. Through our optical methodology and bio-nano integration we can address potential biomedical issues in a team effort.
Research Interests:
• Mathematical programming
• Microeconomics
• Transportation & mobility system

In my current research, I mainly develop mathematical modeling and optimization methods to improve the planning, operations, and management of transportation systems. My research has been applied to ridesharing, public transit, freight transportation, air transportation, transportation policy and economics, and transportation data analytics. I expect to expand my work to new areas such as autonomous and connected vehicles, smart cities, and cyber-physical systems.

How a Collaborator Could Help Me:

I expect to collaborate with experts on human behavior, mass communications, marketing, and psychology mainly to understand (1) how travelers and commuters respond to emerging disruptive transportation technologies, such as self-driving vehicles and connected vehicles, and (2) how social campaigns influence the adoption of such technologies. I would also like to collaborate with experts on microeconomic theory and empirical economics to enhance my current research on public transit regulation and subsidization.

How I Could Help a Collaborator:

Both venture funding and government funding are on the rise in the transportation sector. I can help identify the right transportation/mobility problem that is likely to be funded by agencies, taking full advantage of our own research strengths.
Aavudai Anandhi Swamy

Department of Civil and Environmental Engineering

anandhi@famu.edu

Research Interests:

• Environmental change is constant - access, adapt, mitigate

The goal of my research is to access and apply: the hydrological and ecological processes; the environmental changes (climate, water-use and land-use); the interactions of the processes and changes at the ecosystems-water-climate nexus; the vulnerability, adaptation and mitigation of the nexus to environmental changes. Finally, to access and apply the feedbacks of these changes on the climate system. This involves developing new and improving existing models, methodologies and frameworks; using data-mining techniques, scenarios, multivariate statistics and conceptualizations.

How a Collaborator Could Help Me:

By providing Experimental data as well as bringing socio-economic component

How I Could Help a Collaborator:

By developing new and improving existing models, methodologies and frameworks; using data-mining techniques, scenarios, multivariate statistics and conceptualizations in water and plants.
Research Interests:

- Community
- Urban planning
- Consumer wellbeing

I study how people create and consume community, particularly in neighborhood settings. My research explores planned neighborhoods that are intended to bring people together and create more connected, socially integrated neighborhoods. Additionally, I study residential segregation and the downstream consequences of the US populations shifting into increasingly homogeneous neighborhoods.

How a Collaborator Could Help Me:

I would hope to learn from potential collaborators who are interested in urban planning and design, demography, sociology, political science, or other fields, who could help me understand more about smart design, population data, and public policy. My research has explored community and neighborhood design from a consumer point of view, but there is an important research gap for work that explores the importance of residential planning and design that could provide an important impact for individual consumers, communities, cities and society.

How I Could Help a Collaborator:

Scholars in the other fields I named above (sociology, urban planning, public policy, etc.) have done work on neighborhood planning. However, not much has been done from a consumer perspective. I could offer insights and findings from my own data on how consumers interact with the market, realtors, developers, and the neighborhood spaces themselves, in helping these researchers in other fields push their work forward.
Sana Tibi
College of Communication & Information
sana.tibi@cci.fsu.edu

Research Interests:
• Literacy
• Psychology
• Educational technology

I study cognitive processes of reading Arabic. I collect data on different reading and reading-related skills. The current data set is a longitudinal one taken from Arabic speaking children (KG & G1).

How a Collaborator Could Help Me:
Statistical methods and educational technology.

How I Could Help a Collaborator:
I can help with regard to the knowledge and skills in the area of literacy in general, and Arabic language and literacy in specific.
Research Interests:
• Computational fluid dynamics
• Phase-change systems
• Fluid-structure interaction
• Multimaterial simulations

At the Computational and Theoretical Multiphysics Lab (CTML), we study the multimaterial/multiphase systems using computational modeling and simulation. Examples are the applications of fluid-structure interaction in heat transfer and phase change systems.

How a Collaborator Could Help Me:
We are looking for collaborators with expertise and capabilities in physical modeling and experiments of multimaterial/multiphase systems.

How I Could Help a Collaborator:
With our computational capabilities and their experimental expertise, we would be able to tackle interesting problems in engineering and physical sciences.
Research Interests:

- Community engagement
- Sustainability
- Social justice

Sustainability in higher education, community based learning.

How a Collaborator Could Help Me:

Incorporate a community based project into their class.

How I Could Help a Collaborator:

Develop and build partnership, co-create project, project management.
Research Interests:

• Data fusion
• Internet-of-things
• Automation

My research has been focused on manufacturing system design, automation, and process control by integrating applied statistics, image processing, optimization, and control theory with engineering knowledge with broad applications including automotive, energy system, semiconductor, and nano-manufacturing.

How a Collaborator Could Help Me:

Since my focus is on analytics and algorithms, I am seeking collaborators with a particular process for which my methodology on data fusion and joint decision-making can demonstrate its value.

How I Could Help a Collaborator:

I expect to help the collaborator improve their system repeatability/stability and reduce wastes, leading to a high-efficient lean solution.
Zuoxin Wang

Department of Psychology

zwang@psy.fsu.edu

Research Interests:

• Social behaviors
• Drugs of addiction
• Neurochemical mechanisms

We use a well-characterized rodent model to study neurochemical regulation of social bonding and social buffering as well as social and drug reward interactions and their neurochemical underpinnings.

How a Collaborator Could Help Me:

We are looking for someone with cutting edge research techniques to be applied for our research.

How I Could Help a Collaborator:

We have a unique animal model and extensive experience on studying neurochemical regulation of social behaviors. We will be glad to work with colleagues who are interested in combined human/animal approaches in translational research for human health.
Research Interests:

• Participatory-based methods
• Hypervulnerable populations
• Systems thinking (experiential activities)

Development of PAR-based interactive interventions. Game-based and systems thinking.

How a Collaborator Could Help Me:

Technology to develop digital interventions, knowledge and experience with unique hypervulnerable population, funding opportunities (submissions)

How I Could Help a Collaborator:

Social science research, mixed methods (strength in qualitative), CBPR/PAR expertise, game design
Research Interests:
• HIV and other non-HIV Sexually Transmitted Infections
• Sexual Health
• Migration and Health

I have ongoing HIV research (e.g., HIV and hypertension among African American and Asian/Pacific Islander men who have sex with men) funded by NIH and other agencies. I have several initiatives in development to address sexual health (e.g., non-prescribed hormone use among transwomen) and HIV-related issues (e.g., smoking cessation targeting HIV-positive individuals) in China, Viet Nam, and U.S.

How a Collaborator Could Help Me:
I am new to FSU. I would like to learn from colleagues who share similar research interests as mine, especially focusing on transdisciplinary approaches (e.g., behavioral, clinical, genomic, fMRI).

How I Could Help a Collaborator:
My research has been funded by NIH and other DHHS agencies for more than two decades, and I am quite knowledge re the working of NIH. I also have experience in research infrastructure building, and can contribute to these issues. Also, I am trained in social psychology, and am keen to be connected with colleagues who are interested in cutting-edge social and behavioral science methodologies (e.g., social network; socio-epigenetics).
Research Interests:
• Materials characterization at atomic scale
• Phase transition in-situ TEM study
• TEM

My research is in the materials science field, particularly using advanced transmission electron microscopy to study materials at atomic resolution. Currently, I am working on topics of transition metal oxides, such as defects effect on the physical properties.

How a Collaborator Could Help Me:

A useful potential collaborator will be a materials grower, particularly research on novel materials system, and materials characterization by TEM will be essential in carrying out the research. A collaborator who has the same interest in some materials system is interested in collaborations on proposals.

How I Could Help a Collaborator:

My strong point is materials characterization by advanced TEM techniques. I can provide useful information on the materials system interested by my collaborators.
Peng Xiong

Department of Physics

pxiong@fsu.edu

Research Interests:
• Novel superconductivity
• Spintronics
• Quantum computing

Experimental condensed matter physics.

How a Collaborator Could Help Me:
Providing new quantum materials.

How I Could Help a Collaborator:
Providing the capabilities to make micro/nano devices and low temperature electronic measurements.
Zhibin Yu
Department of Industrial and Manufacturing Engineering
zhbin.yu@gmail.com

Research Interests:
• Composite
• Energy
• Defense
Advanced composites for electronics and optics.

How a Collaborator Could Help Me:
Provide materials solutions and process development for scalable manufacturing of multinational sensors for engineering structures, defense industry and digital healthcare.

How I Could Help a Collaborator:
Potentially can collaborate with theoreticians, and teams with focuses on clinic trial studies, optimization and system engineering.
Qian Zhang

Department of Educational Psychology and Learning Systems

qzhang4@fsu.edu

Research Interests:

• Longitudinal data analysis
• Multilevel modeling
• Mediation and moderation analysis
• Missing data problems

How a Collaborator Could Help Me:

I am looking forward to collaborating with a potential researcher on papers and grant applications using my expertise.

How I Could Help a Collaborator:

I am interested in statistical analysis in social science studies. In particular, my research focus is in longitudinal data analysis, multilevel modeling, mediation and moderation analysis, and missing data problems.
Lingjiong Zhu

Department of Mathematics

zhu@math.fsu.edu

Research Interests:

• Applied probability
• Data science
• Financial engineering

Theoretical problems in data science, nonconvex stochastic optimization, Langevin dynamics, momentum-based acceleration; applied probability, point processes, self-exciting point processes; financial engineering

How a Collaborator Could Help Me:

I have many collaborators outside FSU, and they take care of the numerical experiments of the projects. So if you are interested in some problems I’m working on, and have strong numerical skills, that might be helpful.

How I Could Help a Collaborator:

I have strong theoretical skills in probability and related fields.
Research Interest(s):

- Mood Disorders
- DNA methylation and their impact on physical illness (CVD, HIV, Diabetes)

I am interested in the cumulative impact of social factors (i.e., race, ethnicity, poverty, environment) on mood disorder (stress, depression, trauma, anxiety), DNA methylation and their impact on physical chronic illness.

How a Collaborator Could Help Me:

I am also interested in adding suicide to my research trajectory.

A collaborator can help by connecting me with faculty current doing similar research at FSU.

How I Could Help a Collaborator:

I can help the collaborative by providing my research expertise to those seeking to submit grant proposals.
Research Interest(s):
Indigenous substance use

Intervention studies regarding the prevention of substance use and related risk behaviors for Native American and Indigenous populations globally. Studies related to the promotion of health and well-being among Native American and Indigenous populations globally.

How a Collaborator Could Help Me:
Impact of Native American/Indigenous populations who become involved in the criminal justice system due to drug and alcohol use

How I Could Help a Collaborator:
Expansion of research to Native American/Indigenous populations.