2022-2023 Research Innovation and Scholarly Excellence (RISE) Awards

Title: Blueprint / Redbloom
Submitter: Jamie Aelavanthara

Jaime Aelavanthara and Amanda Sieradzki's multidisciplinary project Blueprint/ Redbloom examines the fragile ecosystem of Florida's shoreline. The photographs feature silhouettes of figures gracefully moving through space. Marine plant elements, such as sea grass and kelp, suggest both the natural beauty of the Gulf Coast, as well as its susceptibility to toxic algae blooms and red tide. The photographs, developed with collected ocean water, create abstract chemical reactions, resulting amber-colorations alluding to red tide and other toxic algae blooms. This monochromatic printing process shifts focus from potentially colorful landscapes and figures to textures and forms as a means of capturing the bleakness of this environmental narrative. Blueprint/Redbloom ultimately explores how choreography and photography merge, emphasizing the human connection to these pressing water issues in the Tampa Bay region and beyond.

Title: A pilot health coaching intervention to improve health wellness among Latina breast cancer survivors
Submitter: Claudia Aguado-Loi
Co-investigator: Melissa Morris

Advancement in breast cancer treatment and care contributes to a rise of survivors, yet many will face mental, emotional, and physical side effects impacting their quality of life (QOL). An estimated two-thirds of Latina breast cancer survivors (LBCS) experience distress (e.g., depression, anxiety). This estimate is higher among this population as compared to other non-Hispanic cancer survivors. Improving the survivors' self-efficacy and skills in health wellness practices may reduce or prevent distress that may arise during recovery. This collaborative project with a local Latino cancer survivorship organization seeks to pilot a small, 6-week health coaching intervention to improve health wellness indicators among LBCS in the Tampa Bay area. Aim 1 is to develop a linguistically and culturally appropriate health coaching intervention for LBCS through a process called transcreation – education material translation into Spanish and tailored to an LBCS audience (e.g., the inclusion of traditional food choices in nutritional education modules). Curriculum development is guided by the PI's (Aguado Loi) previous research that gathered insights from LBCS preferred topics, best delivery, and barriers/facilitators to health coaching. Aim 2 will evaluate the feasibility and short-term impact on participants' wellness by piloting the new intervention with 10 LBCS. We collect qualitative observations, demographic information, and baseline/post-intervention wellness markers [distress (depression, anxiety, cortisol levels), QOL, self-reported physical measures (sleep habits, physical activity, and nutrition)]. The outcome of this project is preliminary data for a larger pilot intervention with a comparison control group and a published manuscript in collaboration with two trained UT undergraduates.

Title: Network Clustering and Applications

Submitter: Angela Angeleska

The project is part of my 2022-2023 sabbatical plan and consists of scholarly activities within the field of discrete mathematics that have important implications for the realms of biology/bioinformatics as well as decision-making (specifically, judgement aggregation such as voting behavior). Therefore, there are two major components on which I will be concentrating: (i) network clustering and clustering algorithms with application to bio-networks and (ii) research in social networks clustering and its application to voting behavior. The former area of concentration offers extension and rejuvenation of my previous academic work while the later one provides an opportunity for new and unique explorations. I intend to spend one semester at the Max Planck Institute and/or University of Potsdam in Germany as a visiting researcher in Dr. Nikoloski's research group and one semester as a visiting scholar in Dr. Ivanovska's group at the Department of Data Science and Analytics at BI (School of Business) in Norway. These visits provide a way for retention and initiation of a number of collaborations with eminent names in the field as well as participation at multiple international conferences. Overall, these collaborations are expected to yield several peer-reviewed papers and talks.

Title: When Gaia Falls – An Album of Original Compositions and Immersive Soundscapes
Submitter: Bradford Blackburn

The project I am proposing, When Gaia Falls, will be a musical artwork dedicated to documenting the sonic beauty of the natural world, while simultaneously highlighting its fragility and the need to preserve it. As a composer, I feel it is imperative that we create art that inspires a greater appreciation for nature and the diversity of life on our planet. I hope to do this using the emotional power of music to invoke an empathetic connection within the listener, and thereby positively contribute toward motivating society to work toward achieving harmony with the ecological systems that sustain life on Earth. This past year, I have been researching the growing field of immersive (3D) audio and using techniques of immersive recording and mixing to develop soundscapes derived from nature and humanity's impact on nature. These soundscapes will be blended with interludes of artificially generated/processed sound (electroacoustic music) in a way that prepares the listener for the musical responses that are to be interspersed throughout the album. The musical responses will be the emotional underpinning of the work and will include immersive recordings of original acoustic music recorded by live musicians in the new recording studio at UT's Ferman Center for the Arts. I am currently working with the PARMA Recordings music label to produce this album. The RISE grant funding I am seeking will allow me to complete the project by paying for the necessary publication costs and musical expenses to compensate the live musicians for their time.

Title: Critical Thinking Skills, Storytelling, and Principles of Economics
Submitter: Karla Borja
Co-investigator: Suzanne Dieringer

Our research paper aims at developing and evaluating an experiential learning activity, the Storytelling Project (SP), for introductory economic courses required by all business majors at

UT. Our experience with business students indicates limited computation and data analysis skills. Consequently, they face difficulties with articulating the overall meaning and implications of economic and business data. The SP intends to address these limitations. In this project, students will collect macroeconomic data and construct a set of graphs. Then, they will develop a short personal story as an introduction to their data analysis presentation. The theoretical background of communication through storytelling indicates that stories have the ability to connect with the audience and promote a deeper understanding of complex matters, thus improving communication skills. The SP comprises two learning objectives and three tasks, followed by a set of assessment tools and a video presentation. The SP is a semester-long experiential activity that is to be completed in eight Principles of Economics courses. Students will be evaluated at the beginning and the end of the semester using the Self-Efficacy Survey (qualitative assessment) and a series of test questions (quantitative assessment). The authors will compare these findings to those of a control group of students from another eight Principles of Economics courses who did not complete the SP. We anticipate that the analytical and communication skills of business students who have completed the SP will significantly improve, as supported by a literature review. This paper will be submitted to a high-quality peer-reviewed journal.

Title: Growth of carbon nanotubes from catalyst particles incorporating diffusion inhibitors
Submitter: Michael Bronikowski

This work will continue and expand my research into growth of Carbon Nanotubes (CNTs) to lengths sufficiently great for use in materials applications. CNTs are tubes of pure carbon with diameters of approximately 1 nanometer (one billionth of a meter). CNTs consist of single or multiple layers of carbon atoms, arranged in layers. CNTs have remarkable materials properties including high strength, stiffness, and hardness. Large-scale wires and cables made of CNTs are predicted to have a strength-to-weight ratio that exceeds that of steel by a factor of 100. Thus, there is considerable interest in using CNTs for manufacture of materials including cables, wires and composites. However, CNTs can currently be grown to only limited lengths, at best 1 – 2 cm. To take full advantage of CNTs' unique properties, it will be necessary to produce large-scale quantities of CNTs with lengths comparable to the macroscopic sizes of the envisioned applications, i.e., many centimeters to meters or more. In the proposed research, I will continue my investigations of methods to grow CNTs to much longer lengths than currently available. This will be done by investigating, and ultimately finding ways to control, the chemical mechanisms by which CNT growth starts, continues, and eventually stops. In particular, I will investigate ways to extend time for which the CNTs grow, and thus extend the ultimate length achieved by the CNTs.

Title: Papers on Florida Election Administration and Florida Political Campaigns
Submitter: Liv Coleman

This project will be editing and revising three manuscripts about Florida politics for peer-reviewed journals in political science. The three themes are: Florida election administration and cybersecurity; race-based appeals in the Rick Scott and Donald Trump political campaigns in Florida; and parenting rights proposals as vehicles for authoritarian populist movements in

Florida. All three manuscripts to be revised have already been presented at annual meetings of the Florida Political Science Association or the Southern Political Science Association or will have been presented by the initiation of the grant period.

Title: Virtual Simulation Educational Experiences for Nursing Students
Submitter: Sandra Coleman
Co-investigators: June Llerena, Melissa Culp

Our proposal is to create two virtual simulation based educational experiences to assist with meeting program clinical objectives for undergraduate nursing students. Pre-pandemic, hospital resources for training students were stressed and are stretched even further now to provide clinical opportunities for the increasing numbers of nursing schools and students. This project is necessary due to the reduction in clinical (hospital) sites, increasing numbers of nursing students, and a greater demand for innovative and cost-effective methods to provide clinical opportunities for students. Virtual simulations would provide one method for simulating a clinical experience aiming to enhance student clinical judgement and provide an interactive learning opportunity when in person clinical training is not possible. Virtual simulations will also be used as clinical alternatives due to student or faculty illness to allow for the completion of required clinical hours. The opportunity to offer our own virtual simulations will provide significant cost savings to students and provide simulations tailored to student, patient population, and current hospital needs. The project will include creating videos of patient scenario clips in the Nursing Simulation and Skills Lab. The patient scenario clips will be based on newly created simulations designed using the International Nursing Association for Clinical Simulation (INACSL) standards and would provide clinically relevant patient encounters for students to view. The virtual simulations would then be paired with a facilitator guide with questions and activities that would be used to lead structured discussions. The virtual simulations would be utilized for nursing students in their junior and senior years.

Title: Exploring Organizational Culture Change at USNA
Submitter: Deirdre Dixon

Empirically studying organizational culture change and how culture is actively embedded into an organization is challenging. There are relatively few times in which organizations can make drastic shifts that will immediately impact the culture. Thus, scientific knowledge regarding how to actively change and embed organizational culture is limited. The United States Naval Academy (USNA) was interested in changing the culture in small units (130-150 midshipmen each) who live, work, and go to class together, to realign the culture to reflect the values of the academy. In May of 2021, USNA scrambled the classes of ’23 and ’24 into new units in a strategic decision to purposely change culture. Studying the outcomes of this scramble provides an opportunity to further knowledge regarding how to actively change and embed culture. Now that the classes have been in their new units for a semester, we are starting a study to measure the effectiveness of the building of the new culture. I spent part of my sabbatical at the USNA during the fall of 2021 helping design this study. While focus groups and surveys are beginning now, the interviews will take place this summer over a two-week period after the academic year. The

goal is to go to Annapolis and do these interviews in person while the leaders are carrying out their jobs. They will have had a year under the new company system to reflect on how they were able to impact the culture. This research fills an existing gap in culture literature.

Title: Characterizing the microbiomes of facultatively parasitic mites
Submitter: Emily Durkin

My overarching research program asks how and why animals evolve parasitic lifestyles, and studying facultatively parasitic species (species that are parasitic under certain conditions, but otherwise are free-living) can provide empirical evidence for the evolutionary transition to parasitism. I work primarily with a facultatively parasitic mite (Macrocheles muscaedomesticae) and one of its fly hosts (Drosophila hydei). Research has revealed consistent differences in parasitic attachment behavior among individual mites; however, we are completely unaware of any potential mechanisms underlying these behavioral differences. One possibility is differences in their microbiomes (the microorganisms associated with an organism). Other research has revealed microbes influencing the behaviors of a variety of arthropods. This project has 2 aims: (1) to identify microbial symbionts associated with the facultatively parasitic mite M. muscaedomesticae, and (2) to determine whether there are differences in the microbiomes between mites consistently exhibiting parasitic and non-parasitic behavior. Currently, there is a knowledge gap on the microbiomes of parasites and their potential effects on parasite behavior. The proposed project will expand our understanding of parasite microbiomes by being the first to characterize microbiomes in a facultatively parasitic animal, and the first to investigate a potential link between the microbiome and the expression of parasitic behavior. Beyond providing direct training and support for an undergraduate research assistant, I plan to include my Parasitology class in field collection. The outcomes of this proposed research will include at least 1 publication, a presentation at UT's CNHS Student Research Day, and a presentation at an international conference.

Title: Electrostatic Sampling of Forensic Evidence
Submitter: Kenyon Evans-Nguyen

Sampling residues of drugs and explosives is a critical task in forensics and homeland security. Currently, scientists or screeners use plastic swabs or chemical extractions to remove evidentiary particles from solids. A typical example would be swabbing the surfaces of passenger's hands and airport luggage done in airport security screenings. Captured microscopic evidence particles are then subjected to analysis in an instrument to scan for the presence of explosives. However, swabs can be problematic for subsequent analyses and chemical extraction is cumbersome. Further, both methods ruin underlying evidence on the surface, such as fingerprints or DNA. Therefore, we are developing a new contact-free method for gathering microscopic evidentiary particles from surfaces using static electricity. We use a children's toy (the Fun Fly Stick) as a safe high-voltage source to electrify a metal mesh. When held above a surface, the electrified mesh attracts particles from the surface to it via static electricity (electrostatic attraction). The metal mesh is then directly analyzed using the gold standard method for forensic chemistry analysis, mass spectrometry. We propose to develop this method of electrostatic sampling further

through careful study of the basic science underlying the electrostatic attraction of particles from the surface to the electrified mesh. Additionally, we plan to test and optimize alternative high voltage sources. Finally, we plan to capture particles from the underlying surfaces by using the electrified mesh in concert with a high-powered laser.

Title: Busyness, Mental Functioning, and Dementia Risk
Submitter: Sara Festini

Dementias, like Alzheimer's disease, are debilitating conditions in which mental functioning progressively worsens over time. Certain risk factors have been identified that increase the likelihood of eventually developing dementia, including family history of Alzheimer's disease, high blood pressure (hypertension), and high cholesterol. Nevertheless, other protective factors have been identified that lower dementia risk. One of these potentially protective factors is lifestyle engagement, or how active and busy one is in one's daily life. I have conducted prior research that found that those middle-aged and older adults who reported being more busy tended to have better mental functioning than less busy individuals (Festini et al., 2016). However, this study was conducted in a very healthy sample of participants with few risk factors for dementia. I propose to conduct a new research study that examines the relationship between busyness and mental functioning in individuals with risk factors for dementia. In collaboration with a colleague at the University of Alabama, I plan to analyze data from the Alabama Brain Study, whose research participants all have at least one risk factor for dementia. I aim to examine whether the observed relationship between a busy lifestyle and better mental functioning is present in individuals at higher risk for Alzheimer's disease and other dementias. The results of this research will be submitted to a peer-reviewed academic journal. I also plan to write a second peer-reviewed article that discusses my current scientific perspective on busyness and mental functioning, based on existing relevant literature.

Title: Measuring the Aging of the Incarcerated: Toward a more appropriate functionality assessment of aging inmates
Submitter: Chivon Fitch
Co-investigator: Brandon Dulisse

The purpose of this project is to propose the creation of an assessment tool that can be applied uniformly to more accurately determine functionality and elderly status within the prison setting. During the course of this project, we will take research from a previously published article that detailed the limitations of current functionality assessments used in prisons and jails across the United States (see Dulisse, Fitch, & Logan, 2020). In particular, our previous results indicated that many assessments of functionality and elderly status in prison are lacking or inappropriate as they were often designed for use within a nursing home or in general society. In addition, we found that when determining elderly status, outdated or inappropriate assessments place undue focus on chronological age, instead of other empirically validated age-related factors like mental, physical, and social processes of aging. With funding from the Research Innovation and Scholarly Excellence (RISE) Grant Program, we intend to apply our previous findings in creating a more appropriate and universal tool that can be effectively implemented at low cost and

without substantial training of current staff. This project will be proposed in a manuscript format with criminal justice policy makers and correctional administrators in mind. The eventual goal of this project is to publish this prototype assessment tool in a peer-reviewed journal to supplement the future prospect of obtaining a National Institute of Justice (NIJ) grant providing the resources to implement the tool into pilot testing in prisons and jails across the nation.

Title: Post-Materialism and Environmental Activism in the Global South
Submitter: Kevin Fridy

Inglehart's (1977) classic text points to a post-war future in developed Western democracies. There were signs younger generations were turning away from self-interested materialistic pursuits. They were turning toward non-material goals like self-expression, equality, human rights, and environmental protection. Over the next several decades, Inglehart (eg 1988, 1990, 1997) set about testing this hypothesis. He founded the World Values Survey (2021) and set about broadcasting its reach into diverse non-Western corners of the world. When poorer countries were added to the mix, populations were found to be more motivated by self-interest. Given the challenges many people in these areas face procuring economic and physical safety, they do not have the time to worry about more altruistic concerns. The proposed project looks at one post-materialist value (environmentalism) in an atmosphere (Northern Ghana) theorized to be inhospitable due to low levels of industrialization and high levels of poverty. Inglehart's hypothesis is easy to deduce. There will be little concern for abstract environmental issues because material needs win out. Ensuing scholarship found evidence to support (eg Loubser 2018; Mayerl and Best 2018) and contradict (eg Davis 2000; Mostafa 2013) this hypothesis at the population-level. What has not been done, however, is a systematic analysis of environmental activists from the Global South to see whether these outliers are a potential post-materialist vanguard or practicing a form of materialist environmentalism that may serve a model for environmentalists speaking with communities worried promoting a healthy environment will hurt their ability to put food on the table.

Title: Confession Carried Aloft: Music, Religious Reform, and English Identity in Mid-Tudor London
Submitter: Anne Heminger

The religious reforms of the mid-sixteenth century raised important questions about what it meant to be English in the Tudor period—after all, weekly church services with a standard set of rites and music had been one of the few constants for English people of all ages and classes for centuries. This research project, which will eventually take the form of a monograph titled "Confession Carried Aloft: Music, Religious Reform, and English Identity in Mid-Tudor London," examines the key role religious music played in the formation of English identity in the nation's capital as the governments of Edward VI (r. 1547–1553) and Mary I (r. 1553–1558) imposed competing religious agendas on a populace whose members held a plurality of views about reform. The project begins by examining the relationship between the "official" religious policies of Edward VI and Mary I and the musical practices of London's parish churches, demonstrating that those across the confessional spectrum relied on links to the Henrician past to

redefine their worship spaces. In the public sphere, however, supporters of the Edwardine and Marian governments sometimes differed; though both turned to the new genre of godly ballads, the former shaped discourses around Englishness and religion by promoting scripture-based song, while the latter relied heavily on public processions to reinforce an explicitly Catholic identity. "Confession Carried Aloft" thus argues that in using specific music to assert confessional preferences, Londoners sought to forge their own understanding of their identities separate from Catholic (and Protestant) Europe.

Title: Enantioselective Aziridinium/Fluoronium Ion Formation Using Lewis Base Catalysis
Submitter: Brett Hemric

This proposal seeks to utilize the established concept of enantioselective Lewis base catalysis with nitrogen and fluorine sources to address challenges in alkene amination/fluorination chemistry and expand the versatility of current Lewis base catalyst strategies. Both nitrogen and fluorine hold a privileged status within modern pharmaceutical development and methods to access organic molecules containing these scaffolds is highly desired. Moreover, modern pharmaceuticals exhibit a handedness known as chirality, which necessitates an additional level of reaction complexity to achieve one handedness over the other (stereoselectivity). To achieve this stereoselectivity, this proposal will explore the use of chiral Lewis base catalysts to impart the selectivity need for complex molecular products. Additionally, Lewis base catalysts do not contain many of the toxic metals used in many modern reactions, which decreases the environmental impact of these reactions. Historically, nitrogen and fluorine have not been explored for their use in Lewis base catalysis because they do not exhibit the expanded bonding common to this type of chemistry. This proposal will begin by exploring the interaction of various Lewis base catalysts with a variety of nitrogen and fluorine sources to uncover a synergistic combination that will allow for stereoselective transfer of the nitrogen or fluorine atoms within the reaction. Once a suitable pairing of Lewis base catalyst and nitrogen/fluorine source is discovered, a chiral (single handed) version of the Lewis base catalyst will be synthesized and tested for its ability to create the desired stereoselectivity.

Title: Intercultural Communication: A Practical Guide to Communicating in a Diverse, Global Community
Submitter: Jobia Keys

This project involves the completion, revision, and editing of a single-author, Intercultural Communication textbook titled Intercultural Communication: A Practical Guide to Communicating in Diverse, Global Community. Intercultural communication is the study and practice of people communicating across cultural contexts. Intercultural communication applies to domestic and international cultural differences and considers differences in gender, ethnicity, nationality and more. This textbook will introduce students to fundamental theories, topics, themes, and concepts of intercultural communication. Each chapter will reflect the most recent research in the field and will incorporate digital technology and consider its impact on intercultural communication. In addition, this textbook seeks the goal of building intercultural competency, critical thinking and self-reflection skills that will help the next generation of

citizens embrace cultural differences and become more globally aware. The textbook will be available for college students and educators in the United States and abroad. The textbook will have a total of fourteen chapters, each focusing on one aspect of intercultural communication, including but not limited to intercultural conflict, cultural stereotypes, immigration, and gender roles. The textbook also explores intercultural communication through historical contexts and contemporary perspectives, and is organized in a framework that students will find engaging, informative and accessible in multiple ways. The textbook proposal has already been approved, and chapter summaries will be submitted to Kendall Hunt Publishing Company by April 1, 2022. Once chapter summaries are approved through the publisher's peer review process, one chapter will be submitted until all fourteen chapters are submitted, reviewed, edited, and approved.

Title: Travel and Tourism Application Research
Submitter: Adolfo Lagomasino

This project centers on how we navigate our environments through geolocating and wayfinding applications and how tourism sites are created and documented. To study travel and tourism, one approach is with the implementation of application-based software to conduct, record, and evaluate touristic practices. This project entails researching existing geolocating, wayfinding, and Tampa-based tourism applications, as well as enrolling in a coding training class to learn how applications are designed and what functionality can be included. This project will result in (1) the design of a course proposal on travel and tourism that integrates application design and development and contributes to the creation of a Tampa tourism application, and (2) the production of a manuscript-length paper to be submitted for a conference presentation. The manuscript will focus on the intersection of digital and physical spaces and include the instructional design for teaching a course on travel and tourism.

Title: Fulbright Hays Fellowship in Brazil (Cost-share and stipend request)
Submitter: Sarah Lauro

This is an application to cover the cost-share and a stipend, which will allow me to participate in a Fulbright fellowship to which I have already been accepted, the 2021 Fulbright Hays fellowship to Brazil. (See attached materials). I was previously accepted to a similar program in 2019, which had a tremendous value for my courses. The program involves language lessons, a month of in-country study, and the development of a curriculum project. I apply to continue developing my knowledge of Portuguese and Brazilian history by participating in this Fulbright fellowship program, which will have value both for my teaching and my own research. Brazil was the largest slave colony in South America, and this history is something that is legible in diverse art forms. The Fulbright curriculum of this fellowship focuses specifically on the Afro-Brazilian culture of Northern Brazil. In satisfaction of the requirements for Fulbright, I will create a module that will be used in my courses going forward. (I believe I was selected for participation by Fulbright because of the courses I teach at UT.) Spending time in the north of the country will also enrich my current book project, on commemorations of slave revolt, the working title of which is "Monumental: Alternative Commemorations of Slave Resistance." This Fulbright Fellowship will visit many different sites and regions than I saw during my 2019

fellowship to Brazil, and I want to continue developing my language skills and building my archive for my book by participating in this opportunity.

Title: Continuing the Investigation into Carbazoles as Photocatalysts to Form New Carbon–Carbon Bonds
Submitter: Ashley Longstreet

Human-made organic molecules are major components in essential industries, and building them requires chemical reactions that are efficient by utilizing inexpensive, non-toxic reagents that produce minimal waste. Reactions that produce carbon radicals, a carbon with an unpaired electron, are considered valuable due to their ability to facilitate transformations that allow chemists to piece together large molecules from smaller fragments. The traditional reagents used to produce radicals are highly toxic and generate significant amounts of waste because large quantities of the reagent are needed in each reaction. Therefore, alternatives to these reagents are highly sought after. Recently, molecules known as photocatalysts have emerged as better alternatives due to their lower toxicity and minimal waste production by only requiring small quantities of the photocatalyst to generate the necessary radicals. Our research focuses on designing and synthesizing organic molecules called carbazoles to be used as photocatalysts, then demonstrating how the carbazole derivatives are valuable as photocatalysts in a carbon–carbon bond forming reaction. Currently, the reaction studied was shown to form a new carbon–carbon bond between one combination of organic molecules in high yield using one of our carbazoles as a photocatalyst. To further demonstrate the significance of the reaction and the carbazole, undergraduate students assigned to this project will prepare a substrate scope that will demonstrate how the reaction can form carbon–carbon bonds between different combinations of organic molecules in addition to the original combination studied. In the process, undergraduate students will gain valuable critical thinking and laboratory skills.

Title: Long read genome sequencing of the photosynthetic sea slug, Elysia crispata
Submitter: Pad Mahadevan
Co-investigator: Michael Middlebrooks

Elysia crispata is a sea slug, which has the unusual ability to undergo photosynthesis, the process that plants use to produce energy from light. The slug is able to do so via kleptoplasty where they steal the chloroplasts that plants use to photosynthesize and store the chloroplasts inside of their own slug cells. Furthermore, E. crispata has chemical defenses it uses to deter predators. However, the genetic makeup of the animal (the genome) is missing. Previously in 2018, we were awarded a RISE to sequence the genome of this animal. Sequencing involves determining the linear order of the letters known as bases that make up the DNA of the animal. Unfortunately, we did not obtain a good quality genome due to the type of sequencing method that was used. Therefore, we are proposing to sequence the genome of E. crispata using long read sequencing technology. This means that the DNA fragments that we get from the sequencer are longer in length enabling us to perform a better assembly of the genome. A good quality genome will help us better understand the genetics and evolution of E. crispata. In addition, this

project will result in at least one peer-reviewed publication and will open the door to many new areas of investigation.

Title: Mount Vernon Ladies' Association: Changing the 19th Century Patriotic Landscape in American Literature
Submitter: Lisa McGunigal

This project is an article examining how the origins and evolution of the Mount Vernon Ladies' Association (MVLA)—the first national historic preservation organization and the oldest women's patriotic society in the United States—illustrate the importance of the nineteenth-century women-run house museum movement that began in 1853. I argue for the house museum to be a "parapolitical theater" or a space where political positions are acted on a social stage by women. Researching the original Vice Regents of the Association and their authorial abilities to advance the Association's goals will illuminate the connections between establishing a space in national memory and finding success as published writers. Several of these Vice Regents and early supporters include playwright Anna Cora Mowatt Ritchie; travel author Octavia Walton Le Vert; nature writer Susan Fenimore Cooper; and lyceum lecturer Alice Mary Longfellow. Additionally, this article will trace the influences of the MVLA with a concentration on Queen Lili'uokalani of the Hawaiian Kingdom as she twice visited Mount Vernon, and upon her return to Honolulu, constructed a house museum inspired by the efforts of the MVLA to display Native Hawaiian history and heritage to exert the sovereignty of Hawaii—a powerful subversive interpretation of the American identity attached to George Washington's house. I will also consider the fictional representations of these museums and women's role in them as written by American authors such as Edith Wharton, Henry James, and Henry Adams to demonstrate the influence of politically infused domestic spaces as access points for women into political conversations.

Title: Public Knowledge About White-Collar Crime and Attitudes Toward it in France and the U.S: A Cross-National Comparison
Submitter: Cedric Michel

I have been recently granted sabbatical leave for the academic year 2022-2023 to work on a research project that will compare public awareness of white-collar crime and attitudes toward it among French and U.S. citizens. Although a sizable body of research has gauged public response to upper-world criminality, most studies chose to focus on attitudes and few measured knowledge and its effects on subjects' perceived seriousness and punitiveness. Further, the rare surveys that probed public awareness were limited by non-probability convenience samples. Moreover, these studies were restricted to U.S. citizens. My research project will address these methodological limitations by accomplishing the following goals: 1) Focusing on knowledge about white-collar crime and the effect it can have on attitudes toward it; 2) Enhancing generalizability through the use of panel samples; 3) Providing the very first measure of public response to white-collar crime in France and drawing cross-national comparisons with the U.S. My target populations being the general population in France and the U.S., I will need probability samples to enhance external validity. White-collar crime remains under-researched

compared to street crime, and large national and representative samples are not publicly available. I will therefore have to collect primary data. I have been in contact with various online survey platforms (including Qualtrics, Pollfish and SurveyMonkey) that can provide research participants. I am therefore applying for a RISE grant to compensate my sample subjects.

Title: Contractual Diversification Advantage: A Relational View of the Link Between Diversification and Performance
Submitter: Thomas Pittz
Co-investigator: Kostas Alexiou

Research on the diversification-performance (D-P) relationship has been a favorite amongst management, economics, strategy, and finance scholars (Ahuja & Novelli, 2017; Lim & Audia, 2020). The logic of the D-P relationship is that diversified firms have market power advantages versus firms in single industries, which ultimately leads to superior firm performance. Related diversification market power, in particular, is formidable since the knowledge expropriated from one industry can be leveraged in another (Palepu, 1985). Firms engaged in related diversification achieve positive spillover effects by capitalizing on knowledge reuse between two or more industries (Anjos & Fracassi, 2015). Yet, for all we know about diversification, there has been little investigation into the impact of how diversification impacts interfirm relationships. A foundational predication within our research is that firm diversification will lead to more advantageous relationships with business partners, a hypothesis that we test through contract performance. Our research makes two primary contributions to the literature on firm diversification and relational advantage. First, we extend the customary view of diversification advantages as risk mitigation, increased scope, and the redeployment of underutilized resources (Chang, 1996; Miller, 2004; Teece, 1980) by demonstrating the relational advantages of diversification. Second, in contrast to the traditional understanding of relational diversification advantage that is gained after investments are made in relational capital, we advance a conceptualization of relational advantage that occurs because of diversification. Thus, our findings indicate that diversification can itself be a source of relational rents, which are able to be exploited in contracts with external firms.

Title: CHARLOTTE SALOMON
Submitter: Dana Plays

CHARLOTTE SALOMON is a feature documentary film (1hr 20min), produced and directed by Dana Plays, with expected release in 2022. This film is structured as a bio-pic is told through sources written and described by the artist Charlotte Salomon through her magnum opus “Life? or Theatre?” (L/T), a multimedia art work, consisting of a series of more than 1300 gouache paintings, with text and music.’ Through this work she narrates her autobiography from memory. The film is about a young German Jewish artist (1917-1943) who came of age in Berlin during the rise of Nazism, and left Berlin in December 1938, after Kristallnacht and was sheltered by the filmmaker’s great aunt Ottilie Moore in Villefranche-sur-Mer, France from 1938 to her death at Auschwitz in 1943. Text and high-resolution scans of her paintings and photographs provided by the Charlotte Salomon Foundation through the Jewish Museum in Amsterdam. The film pays

tribute to Charlotte Salomon and Ottilie Moore by creating alignments between the two women. Through public domain and licensed media around this story, and plates of paintings and photographs from the Charlotte Salomon Foundation, Plays interweaves the personal and private life within the setting of WWII modeled by the methods of storytelling found in the LT Series. “Charlotte Salomon,” is a companion piece to Plays' documentary feature "The Story of Ottilie Moore," also set for release in 2022. The film will bring to light the development of Charlotte Salomon as an important modernist artist of the Twentieth Century.

Title: The Makings of a Revolutionist: William Davis Robinson and the Business of Latin America's Age of Revolutions
Submitter: Edward Pompeian

My project will result in the completion an article manuscript that I will submit for publication in the peer-reviewed academic journal, The Americas: A Quarterly of Latin American History, one of the principle scholarly journals for Latin American history. My grant activities will be two-fold. First, I will travel to Philadelphia to conduct focused archival research at the Library Company of Philadelphia, Historical Society of Pennsylvania, and the Library of the Masonic Temple of Pennsylvania. Second, I will use the summer stipend provided by the RISE Grant to complete my article manuscript, which I will submit to the editors of journal, The Americas, by December 1, 2022. My scholarly contribution will be an original research essay based on a biographical study of a Philadelphia merchant whose business activities and support for revolution reveals a history of the transnational movement of people, goods, and ideas in the Greater Caribbean during the era known as the Age of Revolutions, 1776-1830. This article manuscript is a revised version of a chapter that was removed from my forthcoming book (April 2022) due to the academic press’ page constraints that were in my contract.

Title: Revisiting Cuban Immigrant Revolutionary Life through the Recovered Newspapers of Key West, Tampa, and New York, 1868-1900
Submitter: Denis Rey
Co-investigator: James Lopez

This project seeks to recover, digitize, and render searchable the newspapers published by the Cuban immigrant communities of Florida and New York from 1868 to 1900. The artifacts recovered will be used by a group of scholars working collaboratively to reconstruct, interpret, and better understand life in these exile communities. Those that came to Key West, Ybor City, West Tampa, and New York during and after the failed "Ten Years War" for Cuban independence created vibrant communities in these localities; places where commerce, culture, and revolutionary zeal flourished and democratic and egalitarian ideals made way for integrated societies where blacks and whites, male and females, and rich and poor worked, played, and lived together, side-by-side. In Ybor City, for instance, these immigrants created mutual aid societies that provided health and social services to members (Cubans, Spanish, and Italians each had their own mutual aid societies). Cigar factory owners provided honest financing to workers so that they could buy homes. Cigar workers would pay fees to hire lectores, or readers, who would read newspapers, novels, and plays while the workers rolled cigars. These were

progressive and informed individuals who also published newspapers advocating a wide array of causes and ideas. The newspapers published by these immigrants represent a window into daily life. They have become valued instruments for scholars interested in researching the formation of Cuban identity and nationhood. Our team will work with these resources, collaboratively, to publish an edited volume and create metadata for use in digital humanities.

Title: Corporate Social Irresponsibility: A Meta-Analysis
Submitter: Ashley Salaiz

In this project, we are conducting a meta-analysis of all studies focused on corporate social irresponsibility for the past 30 years. Corporate social irresponsibility (CSI, hereafter) has gained increased traction from both academicians and practitioners over the last several decades due to its potential negative impact on the financial performance and reputation of the firm. Compared to the rich body of research on corporate social responsibility (CSR) and financial performance, researchers have paid relatively less attention to the aggregated evidence regarding CSI. The last meta-review on the relationship between CSI and financial performance was done twenty-five years ago by Frooman (1997), who analyzed twenty-seven event studies on socially irresponsible and illegal behaviors. Twenty-five years onward, the attention paid to socially irresponsible corporations has created an opportunity to increase our knowledge of how CSI affects firm performance. In this study, we perform a meta-analysis on 148 studies measuring CSI and firm performance in an effort to update the field and drive future research directions towards gaps identified in the literature.

Title: Stellar Streams in the Milky Way Disk
Submitter: Simon Schuler

A main goal of astronomical research is to understand our origins, from the origin of life on Earth to the origin of the Universe itself. A major aspect of these studies is the origin and evolution of our Milky Way Galaxy. While stars only make up about 5% of the total mass of the Galaxy, understanding how and where stars form, and their subsequent kinematics (motions), is a critical component to recovering its evolutionary history. Collaborating with colleagues at institutions in the USA and abroad, I am working to identify stars with similar Galactic kinematics, generally known as stellar streams or moving groups, and analyzing their compositions in order to put constraints on their formation and kinematic histories. We are using the Gaia catalog- a database of positions and three-dimensional motions of about one billion stars in the Milky Way- to identify stars with similar kinematics, which may indicate that the stars share a common origin. We then are using spectroscopic data obtained with large professional astronomical telescopes to determine the compositions of the stars; stars that formed together are expected to have similar compositions. Combining the kinematic and compositional data of stars in stellar streams can place potentially strong constraints on the formation history of the stars and the Galaxy. This proposal is a request for continued support of my contribution to this project, which has included five UT students thus far and presents an opportunity for additional students.

Title: Development of Advanced Mass Spectrometry Databases to Aid in the Isolation and Structure Elucidation of Marine Natural Products
Submitter: Christine Theodore

Natural products, substances produced by living organisms, are a vital part of the modern drug discovery pipeline. In particular, natural products isolated from marine organisms have had recent success in moving from the laboratory and into clinical trials. Currently, my work focuses on isolating and identifying natural products obtained from macroorganisms (such as invertebrate animals) and microorganisms (bacteria) collected from Florida waters. Funding from the University of Tampa and external sources has yielded promising results and provided students from the Biology and Chemistry departments the opportunity to participate in interdisciplinary scientific research. This proposal seeks funding to accomplish two main goals: 1) To continue work on the large library of collected organisms and extracts that have been generated by student researchers in my research laboratory. 2) Incorporate advanced data sets generated University's new (NSF grant supported) mass spectrometer into the laboratory's current workflow. Mass spectrometry-based analysis of natural product extracts is currently receiving significant attention by natural product researchers and represents a paradigm shift in how extracts are screened and prioritized. This proposal would allow students to work at the forefront of a changing field. This project will provide new opportunities for University of Tampa students. This "learning by doing" is an essential part of the experiential learning process and a key part of the University of Tampa's mission and QEP.

Title: Art History as an Answer to Life, the Universe, and Everything: A SoTL Investigation on Disciplinary Competencies as Essential General Requirements
Submitter: Rosemarie Trentinella

As a discipline, art history has gone through many permutations, often simultaneously. One of its most recent "turns" is that toward the scholarship of teaching and learning (SoTL), a turn so new that the first (and only) peer-reviewed venue for publication in this sub-genre did not emerge until 2016. The project proposed here represents the start of my engagement with this emerging field (dubbed SoTL-AH by its practitioners). This first phase necessitates an immersion is the extant scholarly literature, both within the art historical sub-field as well as pedagogical scholarship at large, followed by the development of a "pilot test" SoTL study to be conducted in the future, to be explored through conference presentations and "work-in-progress" peer publications. By definition, SoTL research is multi-disciplinary in that it requires its practitioners to engage simultaneously within as well as outside of their own disciplinary training. Although art historians are no strangers to interdisciplinarity, to engage in SoTL-AH research is to engage not only with art history and the humanities, but also with the social sciences, the behavioral sciences, and other fields outside any traditional preparation. The ultimate goal of this project is to establish an ongoing SoTL research study on the efficacy and impact of interdisciplinary pedagogical techniques from the realm of art history that can be transferred and applied to the general education curriculum at the University of Tampa for the benefit of all students, no matter their academic background or interest.

Title: State Legislators and the Determinants of Error
Submitter: Kathryn VanderMolen

I am applying for RISE funding for the 2022-2023 academic year to develop a legislative capacity-focused research project and include students in the process. I want to know why some state legislators frequently commit bill drafting error and others do not. Questions about the ability for state legislatures to competently make policy is a less-studied aspect of state institutions that differs substantially from Congress. The U.S. Congress is a high-capacity legislature that delegates to a high-capacity bureaucracy, which may not be reflective of the larger population of legislatures and legislative processes (Boushey and McGrath 2017). My proposed project attempts to gain more analytical leverage over questions of capacity by looking to the state legislatures, which vary in their resources, governing arrangements, legislative processes, and other factors that may be related to competent policymaking. This project builds on a 2018-2019 RISE grant, which examined state legislative drafting error within and across state legislatures. My colleague and I (Jonathan Lewallen) proposed a new quantitative measurement strategy for scholars to capture these errors, which is currently under peer-review at Political Science Research and Methods. Research on this form of capacity is still underdeveloped, and I think investigating the individual determinants of committing drafting error will build out this literature in a substantively important way. In analyzing where and why we might expect a legislator to commit error, we are left with a more complete picture of the ability for state legislatures and their members to be able to legislate competently across the states.

Title: A Mindfulness Approach to Burnout and Compassion Fatigue Among Educational Leaders
Submitter: Adrianne Wilson

The global COVID-19 pandemic has dramatically changed the scope of teaching and leading in the K-12 educational sector. As a result of stress-induced demands provoked by this pandemic, school leaders are at an increased risk for physical, emotional, and mental health challenges. Studies on self-care suggest mindfulness, which is defined as possessing a heightened awareness of mental, emotional, and physical responses, is one approach to reducing workplace stress and burnout. Individuals who practice mindfulness are consciously self-aware and consistently self-monitor. For school leaders, embracing such practices is crucial for day-to-day decision-making as well as crisis management. Using an online survey and focus group methodologies, this research project will explore mindfulness approaches used by school leaders as a form of self-care in mitigating their workplace burnout and compassion fatigue. This study will also introduce the Wisconsin Initiative for Stigma Elimination (WISE) and Rogers Health compassion resilience toolkit to school leaders to understand if such mindfulness practices included in the toolkit can assist with workplace resiliency and burnout. Ultimately, this research will inform educational leadership programs and school districts about mindfulness as a means for promoting self-care and wellness, while reducing workplace burnout and high attrition rates within the profession.

Title: Medieval Radicalism: Social Justice and Reform in the European Middle Ages

Submitter: Daniel Wollenberg

For the last three years, I have been researching and writing a book, Medieval Radicalism: Social Justice and Reform in the European Middle Ages. It is under contract with Bloomsbury Academic Press/IB Tauris, and it has a tentative publication date of late 2022/early 2023. My book project treads against the current of many standard narratives of the European Middle Ages by focusing on radical movements and figures from the medieval period and by showing that there were many voices of dissent in the pre-modern period that were calling for greater social and economic justice and for radical political change. My work seeks to recalibrate entrenched but limited narratives of the Middle Ages in Europe as inherently orthodox and conservative by highlighting medieval movements and calls for social and economic justice and democratic political reforms. My goal is to complete the fourth and final chapter and an introduction in Summer 2022. With this grant funding, I plan to visit the British Library in London for a week to conduct research in both medieval and early modern manuscripts and in many primary and secondary sources that are not available via Interlibrary Loan to UT. The fourth chapter of my book concerns radical dissent during the period of the English Civil War in the seventeenth century, and there are a handful of crucial, rare manuscripts held by the British Library from that period that are not fully digitized and that would be vital for my research and for completing my book.

Title: CyberAttack: A Story-driven Educational Hacking Game
Submitter: Alper Yayla

Cybersecurity attacks are becoming daily occurrences, affecting not only individuals and businesses but also the nation's critical infrastructure. Despite the critical need, cybersecurity education is still facing challenges. The main challenge is that cybersecurity is perceived to be a technical field aimed at stereotypical individuals with a technical background, preventing college students with diverse interests and backgrounds from pursuing this field. Attracting young and diverse people to join the cybersecurity workforce requires innovative pedagogical methods beyond traditional education, especially to make the field more accessible. One important aspect is that the necessary skills for cybersecurity are best acquired with experiential learning techniques that use real-life examples and engaging games. Another aspect is that the students should be able to discover and learn through trial and error in a safe environment, without the fear of damaging an actual system. Research suggests the use of gamification techniques to increase engagement, awareness, and motivation in learning material that is perceived as difficult. Considering these factors, we aim to create a working prototype for a story-driven hacking game. In this game, players can conduct cybersecurity-related tasks through various hypothetical quests. Each quest is tied to an educational material, such as recorded videos and questions, under a learning objective. At the end of each quest, players are forced to make a decision, affecting the story and progress (i.e., fame, money, reputation, points). As students play, they gain hands-on experience and see the consequences of their decision in the non-linear story of the game.

2022-2023 Professional Development Awards

Title: Proposed 2023 National Endowment for the Humanities Institute "José Martí and the Immigrant Communities of Florida in Cuban Independence and the Dawn of the American Century"
Submitter: James Lopez
Co-investigator: Denis Rey

Denis Rey and I were awarded a 2019 National Endowment for the Humanities grant in the amount of $200,000 to establish a Summer Institute for college professors on the importance of the role played by the immigrant communities of Ybor City and Key West in the fight for Cuban Independence and the U.S. intervention in the Spanish-American War. I was awarded a PDA in AY 2017-2018 cycle which was vital to providing me the time needed to promote and organize what turned out to be a very successful institute. We are currently applying for a new NEH grant to organize a second Summer Institute in 2023 on the same general theme with some important modifications. I was granted a PDA for spring 2021 contingent upon a successful application for a 2021 Summer Institute, but that application was unsuccessful and I renounced the corresponding PDA. This current application for a PDA is essentially identical to the previous two, and should also be contingent upon being awarded a second NEH grant for 2023 (announcements will be made in August 2022). I am therefore applying for a PDA to be used in spring 2023 to prepare a second NEH Summer Institute at UT, if we are fortunate enough to again be awarded the grant.