**Faculty Development Grant Awards: 2019 – 2020**

***Awards to Faculty in the School of Arts, Education, and Humanities***

**Project Title:** *Asadora*: Reproducing a Nation through Japanese Serialized Television Drama

**Faculty Investigator Name:**  Jiwon Ahn, Film Studies

**Abstract:** Originating in the 1960s, the Japanese “morning drama” television series known as *asadora* has evolved into a unique cultural institution. With its 100th series being aired by NHK (Japan’s national broadcasting organization) in 2019, the *asadora* constitutes a particularly nationalist format of public television in an age of globalization. Featuring epic stories of a heroine pursuing her dream despite setbacks caused by historical upheaval and societal challenges in the early 20th century in Japan, shows air every weekday morning for six months and typically run for 150 episodes. Because of its long history and intimate engagement with viewers’ everyday lives, the *asadora* format has become significant in Japan, informing viewers’ national identity and collective values. While it has remained influential over half a century, the genre of *asadora* has not been studied in Anglophone academia.

My research focuses on three primary issues: 1) the negotiation between individual desires and collective values, embodied in the admirable work ethic of the protagonist; 2) the negotiation in gender roles, lead by independent, strong-willed, yet gentle-mannered heroines; 3) the revision of national identities, constructed through references to regional customs and dialects in different parts of the country.

I am interested in examining the *asadora* as a site of negotiation between national identity and transnational values within the larger processes of globalization. Since most *asadora* series are set in specific periods of modern Japanese history, this research will fulfill my ongoing research interest in the role of media texts as sites in which national identity and historical subjectivity are articulated.

**Project Title:** “Unsettling Nostalgia” Paper Presentation and book launch at the Latin American Studies Association Conference in Guadalajara, Mexico 2020.

**Faculty Investigator Name**: Lisa DiGiovanni, Modern Languages & Cultures/Holocaust and Genocide Studies

**Abstract:** The Faculty Development Grant will allow me to disseminate my research at the Latin American StudiesInternational Congress. I will present my book, *Unsettling Nostalgia: Longing for Resistance in Spanish and* *Chilean Fiction and Film.* In this book, which will be in print with Lexington Books by early 2020, I propose the concept of unsettling nostalgia to understand how authors and filmmakers represent memories of the pre-dictatorial pasts in Spain and Chile, as well as the anti-fascist resistance to the military regimes of Francisco Franco (1939-1975) and Augusto Pinochet (1973-1990). Using fiction and film, I illustrate how

unsettling nostalgia is an emotional response and a tool for survivors of political persecution to mitigate the lingering sense of loss in the aftermath of rupture, genocidal violence and displacement. The final outcome is threefold. The Faculty Development Grant will provide me with the opportunity to test and disseminate my ideas in the conference setting, to enhance my professional associations and to learn from experts in the field. These opportunities to engage with activists and scholars will not only benefit me, but also my students at Keene State College. Whether I am teaching a course in Spanish (Department of Modern Languages and Cultures) or in English (Holocaust and Genocide Studies, the Honors Program, Women’s and Gender Studies), I share my research in discussions that enliven the course material and inevitably inspire interest in global learning.

**Project Title**: Off Country  **Faculty Investigator Name:** Taylor Dunne, Film Studies

**Abstract:** Radiation is invisible and atomic weaponry was born in secret. This unseen industry has defined the American landscape through testing, manufacturing and storing nuclear armament. Off Country is a feature length film that uses first person accounts and oral history to critique the inequities built into the nuclear weapons industry. This project focuses on three landscapes: The Trinity Site in New Mexico, the former Rocky Flats Plant in Colorado and the Nevada Test Site.Though these communities inherited the public health crisis of environmental exposure to radiation, their voices have been redacted from history. Traditional nuclear historiography emphasizes the individual accomplishments of a handful of Anglo-American and European participants in the Manhattan Project as a means to overlook the collective experience and physical burden of the citizens adjacent to the Nuclear Weapons Complex. This project archives and curates a chorus of activists, public health workers and community members who tell a story outlining the environmental racism built into military-industrial policy. In visual compliment to hearing this People’s History the film critiques the politics of the built environment by photographically recontextualizing roadside attractions, military museums and contaminated landscapes. This grant will support the costs associated with finishing the post production of this film, specifically preparing the final audio mix, high-resolution image processing and color grading. Additionally, I am developing a special topics course based on the oral history methodologies intrinsic to this project. The course will link Undergraduate community driven fieldwork with documentary filmmaking, personal storytelling and local history.

**Project Title:** Faculty Recital Series: Celebrating 100 Years of the 19th Amendment

**Faculty Investigator Name**: Heather Gilligan, Music

**Abstract:** The 19th Amendment to the United States Constitution broke a major barrier for women across America, finally granting them the right to vote. We are currently in an anniversary year for voting rights, as the 19th Amendment was ratified on August 18, 1920. In celebration of this momentous event, I am planning a recital for September 20, 2020. This will be the first Faculty Recital of the 2020-21 academic year and will take place just one month after the actual 100th anniversary of the ratification date. This concert will serve as the first component of a larger project which will lead to the eventual release of my second CD, an album that will focus on women’s rights. The project involves both the September 20th Faculty Recital and subsequent recording sessions of songs that will be included on my sophomore album. The concert directly supports KSC’s mission, which includes “commitment to learning and cultural enrichment,” “social justice and equity in our community and in our curriculum,” and “civic engagement.” Historically, art has served as a medium for social engagement, a platform for exposing societal truths and advancing shared goals. The concert, and the subsequent CD, will focus on women’s rights, a topic that is both meaningful to me and culturally important. This project represents a melding of art, education, and celebration of progress related to women’s rights.

**Project Title:** FREE!

**Faculty Investigator Name**: Jonathan Gitelson, Art

**Abstract:** I am applying for funding to assist with the printing and framing expenses for my upcoming solo exhibition at Gallery Kayafas in Boston (one of the city’s premier galleries). The exhibition is titled *FREE!* and will feature the Boston debut of my projects, *FREE!, Identity Theft, Let’s Start by Stating the Obvious* as well as newer works which I am still in the process of creating.The exhibition will run from January 24 through February 28, and will consist of photographs, artist books, screen prints and found objects.

**Project Title:** Investigating Communicated Narrative Sense-Making of Queer Miscarriage

**Faculty Investigator Name**: Nicole Hudak, Communication & Philosophy/Public Health

**Abstract:** Pregnancy loss is a common and socially significant health issue (American Pregnancy Association (APA), 2017). To cope with pregnancy loss, many women turn to their partners for emotional support. However, most pregnancy loss focuses on cisgender, heterosexual marriages. Our research expands the knowledge of pregnancy loss by focusing on sexual and gender minorities (SGM). By using the Communicated Narrative Sense-Making theory, we will be interviewing SGMs on how they navigate, make sense of, and cope with their experiences of pregnancy loss. Also, knowing that healthcare perpetuates heterosexism (Zuzelo, 2014), we will be exploring how SGMs make sense of their experiences of pregnancy loss in light of often discriminatory challenges within healthcare.

**Project Title:** The Music of Social Justice Series – Spring 2020 Commission **Faculty Investigator Name:** John Hart, Music

**Abstract:** With the Spring 2020 Commissioning Project, Dr. John Hart and the KSC Concert Band launch a new social justice initiative at the College: the Music of Social Justice Series. The initiative works to dismantle some of the systemic barriers faced by people of marginalized populations in the composition and performance of wind ensemble repertoire. Historically, women composers, composers of color, and composers in the LGBTQ+ community have been drastically underrepresented in wind ensemble concert programming. Lack of representation means that composers from these marginalized populations have been denied the opportunity to influence, let alone create, cultural norms in music, thus perpetuating the status quo of the cultural majority. To address this injustice, the Music of Social Justice Series will celebrate marginalized composers by programming, commissioning, performing, and recording new works for the wind ensemble repertoire each year. The KSC Concert Band will give the world premiere of each work, and will cultivate a reputation for being a haven for the creation, performance, and celebration of works by marginalized composers, acting as a model for other progressive music programs throughout the country. Our inaugural commission, funded in part by KSC Faculty Enrichment, is written by Gala Flagello (ASCAP), a rising female composer, musical entrepreneur, and advocate for women composers. This initiative constitutes a significant step toward reinforcing the College’s missions related to diversity, equity, and inclusion, and demonstrates our dedication to the crucial work of creating a more just society.

**Project Title**: Historic gravestones in Keene – an interdisciplinary study of their cultural and biological significance  
**Faculty Investigator Name:** Greg Knouff, History (see also, Loren Launen, Biology)

**Abstract:** Stone surfaces, including stone monument surfaces, develop microbial biofilms that contribute to their biodeterioration. Microbes degrade stone through biochemical activity leading to mineral dissolution, and physical damage, such as penetration by fungal hyphae. This damage threatens monuments of cultural significance world-wide, and may be accelerating due to anthropogenic influences on climate. In New England one of the cultural resources we will lose is our historic gravestones, many of which are the oldest in the nation.

There have been studies characterizing these complex stone surface microbial biofilm communities, including those occurring on historic gravestones (8). It is known that the communities are complex and include microbes living in symbiotic relationships (lichen and others). Factors like rock type influence the community composition and its functional abilities , with some microbes leading to degradation and others protecting stone. Overall, however, relatively little is known about the microbial communities on gravestones, which limits our ability to predict levels of biodeterioration and to establish conservation strategies.

Gravestones provide important insight into the history of individuals and communities. Keene contains numerous graveyards that have stones from the Revolutionary war era, including stones from smallpox victims of the 18th century related to an ongoing project of Dr. Knouff’s. This project aims to archive information on representative stones identified as particularly important, which will add to the historical record. Furthermore, this work could yield important baseline information towards informing preservation strategies utilizing microbial communities, as has worked for other types of stone monuments.

**Project Title**: *The Space That Surrounds*  
**Faculty Investigator Name**: Emily Lambert, Art (Painting and Drawing)

**Abstract:** This project, *The Space That Surrounds*, encompasses four elements, **NEW RESEARCH** in studios of artists Georgia O’Keeffe, Agnes Martin and Frieda Kahlo, **ONGOING RESEARCH** in the studios of contemporary women artists in New York City, **CREATION** of a new body of paintings and assemblage sculptures at a three week artists residency in New Mexico, and **EXHIBITION** of new works at Keene State and New York City. Being in an artists’ studios lifts the curtain on the methods and process of the artist. In conjunction with ongoing research in contemporary women artists’ studios, I want to see the studios of three of the most

famous women artists. I am curious to see **the studios and the environments where these artists worked and investigate through readings and archives how gender inequality impacts their work, and how contemporary artists deal with gender inequality.**

In Mexico City I will visit the home and studio of Frieda Kahlo, in Northern New Mexico I will visit the studios of Georgia O’Keeffe and Agnes Martin and then attend an artist residency in Carrizozo, New Mexico run by the artist Paula Wilson. At the residency I will focus on the development of a new body of work and process the discoveries from my trip which will then be exhibited in New York City and at Keene State at the Faculty Exhibition. During the Spring of 2020 I will continue organizing studio visits with That Time Of The Month both in NYC and NH.

**Project Title:** Perform with members of the Ibis Ensemble of the University of Trinidad & Tobago, and give clinic to young guitarists there  
**Faculty Investigator Name**: Jose Lezcano

**Abstract:** I plan to accept an invitation to visit the Performing Arts Academy of the University of Trinidad & Tobago, in Port of Spain, and to collaborate with the members of the Ibis Ensemble, the professional performing ensemble in residence of the Academy, made up of the teaching professionals on the faculty. I have also been invited to give a clinic for the guitar students there and the recent graduates. The timing of the visit would also allow me to witness and document for teaching purposes, the annual Carnival Celebration in Trinidad, which is one of the oldest and richest in tradition in the Western hemisphere. The music that I prepare for performance in Trinidad, and my teaching of guitar clinics at the Academy of Performing Arts, will be of benefit to Keene State as I prepare for faculty recitals with KSC colleagues, and in lesson plans and teaching materials for classes that I teach at Keene State College in Latin American music.

**Project Title:** William Carlos Williams and West Coast Culture

**Faculty Investigator Name**: Mark Long, English

**Abstract:** This grant will support my archival research into the modernist poet William Carlos Williams—specifically the role of William in the development of American poetry on the West coast during the 1950s and 60s—and to present a paper on William Carlos Williams and West Coast Culture at the annual convention of the Modern Language Association (MLA). The requested funds will cover my travel expenses to the University of Washington Special Collections (Theodore Roethke collection, 1891-2002) and to Reed College in Oregon to visit the Reed College Special Collections (the Lloyd J. Reynolds Collection, a professor who taught poetry and calligraphy at Reed and worked with the poets Philip Whalen, William Dickey, Lew Welch, and Gary Snyder during the late 1940s and early 1950s). The panel presentation is the first version of an essay that my archival research will help me develop into a publishable essay. I plan to complete this essay in the summer of 2020 and submit the *William Carlos Williams Review*. The grant will also contribute to my teaching and my collaborative work with our archivist at Keene State College, Rodney Obien. Finally, the visit, and my anticipated visits to the libraries in Washington and Oregon, will help me imagine and develop new curriculum to get more of our students working in our archives at Keene State and, in the spring of 2020, to feed into a Textual Encoding Initiative (TEI) with Rodney Obien that we are currently planning with our respective groups of students.

**Project Title:** “The Promise of Shared Commonplaces Across English Education and Writing Studies: Rethinking Composing Practices in Writing Pedagogy Courses for K-12 Educators”

**Faculty Investigator Name**: Christopher Parsons, English

**Abstract:** This project explores the way in which popular writing pedagogy resources for beginning secondary (grades 6-12) English teachers might engage, disengage, and challenge ideologies (Eagleton) about multimodal composition present in writing studies threshold concepts (Adler-Kassner & Wardle). Part of a broader textual analysis of the influence of writing studies scholarship on oft-used textbooks for teaching writing in secondary English Education Methods of Teaching courses, I investigate the approach six particular textbooks (Kittle; Smagorinsky; Christinbury & Lindblom; Bomer; Burke; Gallagher) take to multimodal composition. The textbooks were coded with an inductive / interpretive model of analysis (Hatch) identifying broad categories of ideologies emerging from any and all chapters dealing with writing pedagogy. These texts, aimed at undergraduate and graduate teacher candidates, are dominated by consistent ideologies of multimodality as potentially ‘practical’: a) as a ‘skill’ for a particularly imagined twenty-first century professional world; b) as an area of assumed expertise for students; c) as an “extension” of traditional, essay-focused curriculum; d) as deeply dependent on local school resources. I argue that English teacher educators could both draw on scholarship in writing studies to imagine multimodality more capaciously as well as to trouble threshold concepts in writing studies with pressing ideologies circulating in English Education textbooks.

**Project Title:** Preservice Teachers’ Perceptions of Self-Efficacy & Co-Teaching

**Faculty Investigator Name**: Nancy Peck and Lance Neeper,Education

**Abstract:** This grant will be used to support the transcription services needed to systematically analyze preservice teachers’ perceptions related to participating in a co-taught class that focuses on supporting children who receive special education services. Additionally, it will allow for the researchers to present their findings at conferences. The research questions guiding the investigation include: a) What are early childhood teacher candidates’ perceptions of self-efficacy related to supporting children who receive special education services? and, b) What are early childhood teacher candidates’ perceptions of their learning experience in a co-taught course? Teachers must be prepared to support increasingly diverse student populations in the general education environment by using inclusive practices and collaborative approaches. Barriers to supporting children in the general education settings often revolve around the lack of awareness regarding professional roles and resources. Therefore, EDUC 315 was developed to increase awareness and perceptions of the field of special education by providing field experiences with various professionals. One way to support the inclusion of all children in schools is by utilizing collaborative approaches such as co-teaching. Co-teaching is typically defined as a general education teacher and special education teacher planning and simultaneously teaching together to provide the greatest level of support to students. The goal of this investigation is to explore what potential impact a co-taught course on special education has on future teachers’ preparedness in an effort to inform our own practice and the field of teacher education. The research has been approved by the IRB. With support of this grant, the results will be disseminated via conferences and peer-reviewed publications.

**Project Title:** Video essay: ¿Qué se hace? / What does one do?  
**Faculty Investigator Name**: Patricia Pedroza Gonzalez, Women and Gender Studies

**Abstract:** My project is to produce a video essay based on my written text/performance experimenting with languages- English/Spanish as performance and linguistics. As a text, my manuscript integrates three prose narratives. As performance piece is a play of 50 minutes which I want to edit to produce a 10 minutes video. A preliminary title for this video essay is ¿Qué se hace? / What does one do?. This title will link the words- rumbos-rhumb (routes), identidades (identities) and corazón repartido (distributed/scattered/spread heart).

**Project Title:** *Smoke & Mirrors*

**Faculty Investigator Name**: Lynn Richardson, Art

**Abstract:** This project proposes the research and development of a new body of work. While attending an artist residency I will develop sculptural forms using Rhino3D software to be cut on a laser engraver from wood. Following the residency, I will travel to Istanbul and Dubai to attend the 5th Istanbul Design Biennial and Expo 2020, collecting still and moving images. I will develop new works to be cut from mirrored Plexiglas for a solo exhibition at IS Gallery, titled *Smoke & Mirrors* this will be a large-scale installation with kinetic objects. Additionally, the work will be shown at the Art Faculty Biennial Exhibition at the Thorne-Sagendorph Gallery.

**Project Title:** *The Letters and the Law: Russian Legal and Literary Culture in the Aftermath of the Great Reforms*

**Faculty Investigator Name**: Anna Schur, English

**Abstract:** *The Letters and the Law: Russian Legal and Literary Culture in the Aftermath of the Great Reforms* bridges the field of law and literature and Russian studies by focusing on the rarely examined relationship between Russian law and letters. Despite law and literature’s occasional interest in the Russian classics and Russian studies’ steadier interest in law and justice, meaningful conversations between the two fields have remained limited. Law and literature often treats Russian works in isolation from their historical and cultural contexts. Russian studies have often disregarded law and literature’s theoretical frameworks and conceptual preoccupations. The project draws upon a mix of well-known and rarely read authors and texts, trial transcripts, ceremonial occasion addresses, newspaper coverage, personal and professional correspondence, and memoirs. Among the topics I explore are the Russian writer’s influence on the lawyer’s construction of his professional identity, the implications of the lawyer’s professional ideal for his legal practice, literature’s role in shaping the culture of the Russian courtroom and Russian legal consciousness more broadly, and the consequences of Russian literature’s unusually high cultural prestige for the construction of civil society.

**Project Title:** Bosnian Schools: Education spaces or sites of mass atrocities

**Faculty Investigator Name:** John Sturtz, Education/Holocaust and Genocide Studies

**Abstract:** Since the signing of the Dayton Peace Accord in 1995, Bosnia and Herzegovina has struggled to reconcile and move towards a stable peace. The country remains divided and the legacy of the conflict influences the country’s future. This division appears in the nation’s schools where students are segregated along ethnic lines. Often, these buildings have their own past which is missing from the narrative. Schools and curriculum have become flashpoints of the simmering ethnic conflict. The school buildings represent a subject that challenges the linear understandings of history because not only do the school buildings embody the history but they hold the intersectionality of the dominant public narrative and situate history, memory, politics, temporality, law, ethics and justice in a spatial, physical framework. For survivors and victims, they remain places of atrocities and for perpetrators they remain something else. But, for many in these communities the stories of what occurred in these buildings is not consciously recognized or reconciled.

This paper will explore the questions: What is the current status of Bosnian schools that were used during the war? What do these buildings represent to the students, teachers, families, and community? How do schools situate history, memory, politics, temporality, law, ethics, and justice? The paper will utilize archival documents and oral histories to explore these questions.

**Project Title:** Presentation at the 18th Annual Hawaii International Conference on Arts and

Humanities

**Faculty Investigator Name**: Craig Sylvern, Music

**Abstract:** As defined in our Department’s Standards for Evaluation,one of the areas of scholarship we pursue is the Scholarship of Teaching. With the advent of various types of Internet resources such as YouTube and Wikipedia, I found myself having to rethink my own scholarship of teaching to see how I could adapt it to today’s students. One of the things I observed was that students were accepting the results of the search algorithms from these websites as being definitive, so they were not taking the time to do any subsequent investigating. My colleagues in other departments were seeing the same behaviors with their students as well. I reflected on what qualities and behaviors I observed in pedagogues and professionals I admired as a student and teacher. Perhaps I would find a possible solution as to how to adapt my teaching to today’s Internet-enabled learners. However, the answer was not adapting my teaching but modeling those qualities I saw in my own teachers, the primary quality being curiosity. Cultivating curiosity in my students has improved their understanding and increased their chances at academic success.

My presentation at this conference will enable me to share my observations and strategies for cultivating curiosity in my students and to interact with colleagues from other institutions. In addition, I will be able to impart the knowledge gained from these interactions to my students, colleagues at Keene State, and other educators throughout the region.

**Project Title:** Archives as Commonplaces: How We Listen to History and Create Collective Narratives Panel Presentation & National Archives for Composition and Rhetoric's Special Interest Group (Co-Chair)

**Faculty Investigator Name**: Kate Tirabassi, English

**Abstract:** This panel presentation at the national 2020 Conference on College Composition and Communication offers a rationale for the importance of articulating and enacting specific archival methods for the field of composition and rhetoric, especially when memories of writing programs and initiatives are fading as scholars retire or move from one institution to the next. To illustrate what can be learned by developing archival collections for writing programs, I will share how Keene State College’s writing center staff created an archive after the retirement of its founding director, to better understand how and why current practices had emerged and to advocate for our work during a time of institutional restructuring. I discuss how commonplace artifacts—reports, workshop materials, correspondence, and campus newsletters—helped the staff to identify past practices to reimagine for our current and future work, including workshop topics, ideas for campus outreach, and approaches to tutor training. This examination of the benefits of archival creation for programmatic benefit offers one important inroad to understanding disciplinary histories, though this work takes time, labor, and space (physical or digital). In the panel and as Co-Chair for the National Archive of Composition and Rhetoric’s (NACR) Special Interest Group session, I will share how the NACR is working to support scholars engaged in the labor of archival creation, to create a digital space for scholars to share their archival collections, and to offer guidance on making the case for archival creation as a form of scholarship or professional service.

**Project Title:** Hai! Oui! A Dance Between Countries: French & Japanese Piano Compositions  
**Faculty Investigator Name:** Christina Wright-Ivanova, Music

**Abstract:** This grant proposal application supports a collaborative performance between myself, a classical pianist, and professional animator Christine Banna, M.F.A. The project, entitled “*Hai! Oui! A Dance Between Countries: French &* *Japanese Piano Compositions”,* is a one-hour concert & video performance installation intended for a museum or gallery space. The *Hai! Oui!* project highlights the influences between Japanese and French musical and visual arts culture, with representations from 19th century classical piano works and 20th century new music. Some of the featured composers include Claude Debussy, Olivier Messiaen, Jo Kondo, Akira Miyoshi, Toshi Ichiyanagi and Toru Takemitsu. Several famous 19th century French composers were heavily influenced by Japanese and Eastern visual arts and sculpture, which had entered the Parisian arts scene around the time of the World Exhibition of 1889. One hundred years later, Japanese composers, intrigued by the beauty of French visual arts and French music from the Impressionist era (~1870-1900), wrote contemporary, classical piano works with both French and Japanese musical traits. This project not only fuses French and Japanese Arts culture through piano compositions, but allows a modern American artist to be influenced by these two cultures through music, and to create her own interpretation on the marriage of these two art cultures through animation through 35mm film. This live experience physically brings together visual and musical arts into an ephemeral moment in time, and is designed to be performed in a museum, art gallery or inter-disciplinary institution.

***Awards to Faculty in the School of Sciences, Sustainability, and Health***

**Project Title:** Protecting which nation? Different regimes of sovereignty and sacrifice in the COVID-19 pandemic.   
**Faculty Investigator Name:** Sasha Davis, Environmental Science, Geography, & Sustainability

**Abstract:** This research project will examine the way that different forms of governance have affected three different U.S.-affiliated islands' ability to manage their response to the COVID-19 pandemic. The three Pacific islands I plan to study – O‘ahu, Majuro Atoll, and Guam – share the common history of once being colonized 'territories' of the U.S., but today they are categorized (respectively) as a state, an independent country (in 'Free Association' with the U.S.), and an unincorporated colony. By examining these case studies I hypothesize that different contemporary forms of governance expose people to very different COVID-19 health risks while also fundamentally affecting local residents' agency to address them. I am applying for a Faculty Development Grant in order to conduct a two-week field research component of this project. While on O‘ahu, Majuro, and Guam I will perform research and conduct interviews with public health experts, government officials, military personnel, and sovereignty advocates to examine the different ways that residents in these three contexts have had the agency to conduct anti-COVID public health programs – and to study the ways that political relationships with the U.S. have enabled or hindered them. This project links together and extends three strands of research that I have been undertaking over my career: explorations of sovereignty, community health/biopolitics and Asia-Pacific Studies. I will use this research to write an academic article and I also plan to use this two-week research stint as a preliminary project that can increase my chances of obtaining a larger external grant for continued research.

**Project Title:** Non-intrusive energy management system in residential and multi-purpose buildings.

**Faculty Investigator Name**: Fernando Del Ama Gonzalo, SPDA

**Abstract:** Understanding the energy consumption patterns in buildings is important for evaluating the causes of energy waste and for developing strategies towards specific energy reduction methods. The intent of metering systems in buildings is to provide adequate data that help improve building systems performance. The results of the analysis offer the potential to improve the energy efficiency of the building and reduce the operation costs. Conducting power measurements in different building types will provide managers with relevant data about the operation of buildings and will help end-users reduce the energy consumed by electrical systems in their facilities. This project proposes a new Building Manager System (BMS) made up of a microcontroller unit with 12 different channels to measure the current consumption, open-core current clamps, and a wireless device of data transfer to a central base station located remote to the location of the metering device.

This BMS will be applied to electric boards and the building envelop. The former will be used to analyze the consumption of individualized circuits; the latter will help us predict hygrothermal issues within the walls and roof. Different sensors will communicate the data to the system’s base station. The advantages of the proposed metering system are accuracy, ease of deployment, communication protocol, and cost.

**Project Title:** Two Lectures in Mexico on Pacific Rim Commerce 1810-1830

**Faculty Investigator Name**: Marie Duggan, Economics

**Abstract:** To present twice in Mexico: first in Guadalajara, at the Latin American Studies Association’s conference on the panel organized by Dr. Evelyn Hu DeHart of Brown University “Relaciones Transpacificas;” and secondly to doctoral students at the University of Michoacan. My contribution is to explain the commercial connection of Guadalajara to the Manila-California trading route based on archival research using the Bancroft Library in Berkeley, California and the University of Arizona. The LASA paper and the conversations with Dr. Trejo will permit me to advance work on the special issue of the Pacific Historical Review which I am editing in 2021. The implication of my research into commercial connections between California, Guadalajara and Asia in the early 19th century is that strategic reasons were not the only ones that Spain had for colonizing California, but that mercantile profits also motivated Spanish and later Mexican control of California, which is best seen as one corner of commercial networks in the Pacific Rim.

**Project Title**: The Scholarship of Teaching through the Lens of a Clinical Nutrition Fellowship  **Faculty Investigator Name:** Becky Dunn, Public Health

**Abstract**: The purpose of my project is to broaden and enhance my professional goals in the scholarship of teaching by serving as a clinical nutrition fellow at the Children’s Hospital of Philadelphia. The three-month fellowship is providing opportunities to observe, learn and practice with an elite group of pediatric dietitians and other health professionals in the delivery of medical nutrition therapy at a leading medical facility. The fellowship embodies the scholarship of teaching, specifically discovery, integration and application. Throughout the experience, I will achieve my professional development goals of gaining contemporary perspectives in medical nutrition therapy (discovery), advancing my understanding of existing knowledge (integration), and placing theory into application-based experiences through the direct care of individuals (application). A specific outcome of the experience is to create an open educational resource for students, educators, and practitioners that emphasizes practical application of medical nutrition therapy concepts. There are numerous costly resources available to students, educators, and practitioners that emphasize pathophysiology of disease, and nutrition care process concepts. However, an open educational resource for medical nutrition therapy content does not exist, and provides an opportunity to leverage a digital platform that is affordable and accessible, but also hones in on practical-application based scenarios related to comprehensive nutrition assessment of individuals. Returning to a leading medical facility to complete a three-month clinical nutrition fellowship will enable me to achieve my professional development goals in the scholarship of teaching that will translate into sharing my acquired knowledge and experiences with others.

**Project Title:** Establishing Bio-Ink Design Parameters for Extrusion-Based Bio-Printing

Processes

**Faculty Investigator Name**: MD Ahasan Habib, SPDA

**Abstract:** Extrusion based three-dimensional (3D) bio-printing, a revolutionary technology, deposits cell laden bioink with high spatial resolution and may offer living tissue regeneration. Natural hydrogels are commonly considered as the scaffold material due to their bio-compatibility, less cytotoxicity and highwater content. However, due to the low mechanical integrity large scale scaffold (> 10 layers) with intricate architecture is a challenge. A novel hybrid hydrogel-based bio-ink will designed considering shear thinning behavior, shape fidelity, printability of the composition. Cellulose based materials will used as rheological modifier to achieve desired characteristics. Afterward, a regular and freeform 3D scaffolds following different layer orientations will be fabricated with the proposed hybrid hydrogel to validate its printability and shape fidelity. The required properties of bio-ink are highly dependent upon

the percentage composition and the solid content. The addition of another novel hybrid hydrogel in biomaterial library can open an avenue directing reproducible printability and shape fidelity in 3D bioprinting process.

**Project Title:** Historic gravestones in Keene – an interdisciplinary study of their cultural and biological significance

**Faculty Investigator Name**: Loren Launen, Biology (see also, Greg Knouff, History)

**Abstract**: Stone surfaces, including stone monument surfaces, develop microbial biofilms that contribute to their biodeterioration. Microbes degrade stone through biochemical activity leading to mineral dissolution, and physical damage, such as penetration by fungal hyphae. This damage threatens monuments of cultural significance world-wide, and may be accelerating due to anthropogenic influences on climate. In New England one of the cultural resources we will lose is our historic gravestones, many of which are the oldest in the nation.

There have been studies characterizing these complex stone surface microbial biofilm communities, including those occurring on historic gravestones (8). It is known that the communities are complex and include microbes living in symbiotic relationships (lichen and others). Factors like rock type influence the community composition and its functional abilities , with some microbes leading to degradation and others protecting stone. Overall, however, relatively little is known about the microbial communities on gravestones, which limits our ability to predict levels of biodeterioration and to establish conservation strategies.

Gravestones provide important insight into the history of individuals and communities. Keene contains numerous graveyards that have stones from the Revolutionary war era, including stones from smallpox victims of the 18th century related to an ongoing project of Dr. Knouff’s. This project aims to archive information on representative stones identified as particularly important, which will add to the historical record. Furthermore, this work could yield important baseline information towards informing preservation strategies utilizing microbial communities, as has worked for other types of stone monuments.

**Project Title:** Detecting network intrusions in IoT applications

**Faculty Investigator Name**: Wei Lu, Computer Science

**Abstract:** A network intrusion is any unauthorized activity on a computer network. A network intrusion happens when a collection of infected computers, connected to the Internet, interact to accomplish some distributed tasks for harm-causing purposes. Typical such purposes include such as key-logging passwords, emitting spam emails or phishing scams. The proposed research project involves studies aimed at developing a next-generation cybersecurity system for detecting network intrusions in IoT applications, which shall be offering a significant improvement over existing solutions by addressing two typical challenges, namely (1) How to detect new network intrusions (or zero-day intrusions) as, or soon after they appear? and (2) How to identify applications for unknown and/or encrypted network traffic? The

pilot studies on this research project have recently led three papers published and two papers under consideration to be presented in the 2020 International Conference on Wireless, Intelligent and Distributed Environment for COMmunication (WIDECOM 2020) and the 34th International Conference on Advanced Information Networking and Applications (AINA-2020), and this grant would allow me to present my papers on the two prestigious conferences.

**Project Title:** Development of an assessment tool for STEM education  
**Faculty Investigator Name**: Jacob Pleasants, Physics

**Abstract:** In New Hampshire and across the United States, science teachers are now being called upon to incorporate engineering into their science instruction. The most recent science standards and other education policy documents argue that teachers should use engineering not only to enhance students’ understanding of science concepts, but also to help students understand what engineering is and its important place in society. Most science teachers, however, have little familiarity with engineering. Teacher educators therefore have an important task in order to prepare science teachers who have sufficient knowledge of engineering in order to teach it well. One important tool that teacher educators need to achieve that task are valid and reliable assessments that can give insight into teachers’ understanding of engineering. However, few engineering-focused assessments currently exist for teacher educators.

The purpose of this project is to develop and validate an assessment tool that can give insight into teachers’ thinking about what engineering is and the kinds of technological work that engineers do. The Scope of Engineering Survey has been developed over the course of multiple years of data collection and revision. Most recently, a final version of the survey was administered to pre-service science teachers across a range of programs and across multiple institutions. The goal of the project at present is to demonstrate the reliability and validity of the current form of the survey and disseminate the survey to teacher educators and education researchers across the country.

**Project Title:** The Role of PTSD, Time Orientation, and Stigma on Medication Treatment Success In Justice Involved Individuals a mixed methods study

**Faculty Investigator Name**: Kirk Sanger, Nursing

**Abstract:** The Faculty Development Grant will support my attendance at the Qualitative Research Summer Intensive provided by the Odum Institute for Research in Social Science at the University of North Carolina. This institute brings together experts in diverse fields that focus on research framed around qualitative inquiry. The inclusion of courses related to mixed methods research will enable me and my students to continue to develop a line of research focused on exploring the relationship between incarceration, post-traumatic stress, opioid use disorder, stigma, and time perspective. Utilizing a mixed-method approach will allow us to view these issues from multiple perspectives. We believe that by using a mixed-methods approach we can provide healthcare providers and clinicians with a well-rounded picture of what incarcerated individuals will need for their continued recovery post-release.

**Project Title:** Last Punta\* at San Pedro: Analysis of the Chipped Stone Tools from the Final Season (2020) of Excavations at San Pedro, Ambergris Caye, Belize

**Faculty Investigator Name:** James Stemp, Sociology, Anthropology, & Criminal Justice

**Abstract:** Archaeologists working in Belize continue to reconstruct the impact of the Spanish arrival on indigenous Maya communities in the 15th-17th centuries A.D. Available evidence suggests not all Maya communities were affected in the same way. Some fell under the direct control of the Spaniards; however, others managed to maintain various degrees of autonomy. One way to observe the effects of the Spanish presence is to examine the Late Postclassic and Early Colonial period (ca. A.D. 1450-1700) material culture at Maya sites. One of the few known Late Postclassic/Early Colonial offshore Maya occupations is the site of San Pedro on Ambergris Caye. At this site, chert and obsidian stone tools are being used to document patterns of raw material acquisition, technological production, stone tool repair and recycling, stone tool use, and trade and exchange relationships. Based on the results of stone tool analysis in the 1990s and 2017, Maya lifeways were minimally disrupted on Ambergris Caye. The final season of excavations at San Pedro in the summer of 2020 will provide one last opportunity to examine more stone tools to see if this pattern of minimal disruption continues to hold true. The lack of any major upheaval on the caye, based on archaeological evidence, serves as a valuable contrast to the significant cultural changes noted at many mainland Maya sites after the Spaniards arrived.

**Project Title:** An Efficient Retrieval of Health Records using Multi Keyword Searchable Attribute Based Encryption in Cloud

**Faculty Investigator Name**: Meenalosini Vimal Cruz

**Abstract:** Personal Health Record (PHR) is an online electronic application used by patients to store, retrieve and share their health information in a private and secured environment. While outsourcing the PHR into cloud environment, there exist issues in privacy while storing, searching and sharing of health Information. To overcome these issues, an efficient retrieval of health records using Multi Keyword Searchable Attribute Based Encryption (MK-SABE) is proposed. To manage the increasing PHR data inthe cloud, an Authorized File Level Deduplication technique is adopted. It eliminates redundant files,Thereby reducing the communication overhead. Meanwhile, it supports differential privileges of users in duplication check. Moreover, PHR data is encrypted before outsourcing to ensure the privacy of the data. To perform searching over encrypted data, the proposed MK-SABE introduces Conjunctive Multi Keyword Searchable Attribute Based Encryption (CM-SABE). This maintains the searchable property after encryption for efficient retrieval of health files using range query. MK-SABE uses a Sorted Inverted

Index (SII), which is selectively updated based on the access policy given by the data owner thereby reducing the search time. Further, Global Positioning System (GPS) receiver in mobile is used to trace the location information of the user, which is used in Location Based Encryption (LBE) to provide additional security. To ensure the trustworthiness while sharing the sensitive data to the user, the proposed MKSABE includes a Dynamic Location Based Re-Encryption (DLBRE) technique to re-encrypt the files before sharing. It uses a location based key for re-encryption and manages the number of keys generated in a particular location. From the experimental analysis, it is proved that the proposed MK-SABE reduces the storage complexity by 5%, keyword search time by 25% and improves the overall performance of PHR by 40% compared to the existing schemes

***Awards to Faculty in Mason Library***

**Project Title:** Presenting at LOEX: “How’d You Do That??  From One-shots to a Minor in Information Studies

**Faculty Investigator Name**: Elizabeth Dolinger & Eric Shannon

**Abstract:** In 2016 the Association of College and Research Libraries (ACRL) adopted the Framework for Information Literacy in Higher Education (<http://www.ala.org/acrl/standards/ilframework>) replacing the skills focused Standards for Information Literacy. The Framework redefines information literacy to address the participatory information field, rapid developments in data and privacy, and provides a more contextually based understanding and approach to information literacy. The Framework calls upon information professionals to engage in high-impact teaching practices to increase student understanding of the processes of scholarship, knowledge creation, and information development and its impact on self and society.

In response, the library faculty revised their instruction model by moving their primary focus away from skills workshops toward developing a minor in Information Studies.  Over two years library faculty made significant changes to how they approach their work: adopting a peer-to-peer model of providing research support, collaborating to create the Center for Research & Writing, offering faculty development workshops, and teaching courses in the gen-ed program.

Two library faculty will present at LOEX, a national conference themed “We can do it! Building the Best in Library Instruction.”  Through their presentation titled, “How’d You Do That?? From One-shots to a Minor in Information Studies,” library faculty will share their experience developing the Information Studies minor and significantly altering the way in which they work.

It is an important time to share the story of transition and rethinking how to approach information literacy development because librarians at other institutions are struggling to reinvent their own approach in light of the Framework.