

Coffin Grants 2020-21:

A&S

Colleen E. Krause, Assistant Professor of Chemistry, will use this funding to support her undergraduate research team. Her aims are to develop a 3D printed disposable platform that will house and automatically deliver samples to her previously developed test strips. The platform will provide the foundations for a simple inexpensive diagnostic device for breast cancer detection using minimally/noninvasive procedures.

Yingcui Li, Associate Professor of Biology, will use the funding to support her research on Environmental Effects on Embryonic Neural Development. She will also present her research results at the World Conference on Environmental Toxicology and Pharmacology in Japan.

Katharine Owens, Associate Professor in the department of Politics, Economics, and International Studies, will use Coffin funds to conduct survey research on perceptions around marine debris. For decades scientific research has emphasized addressing the source of marine litter (i.e., reducing or eliminating single use plastics), yet many programs and policies touted as solutions address the symptoms (e.g., beach cleanups). Through a comparative, multi-country study, she will gauge perceptions about this important issue in the US, the UK, India, the Philippines, and Indonesia.

Carolyn Pe Rosiene, Professor and Chair of Computing Sciences, will use this funding for a course release to work on a project which uses *design patterns* (“reusable solutions to commonly occurring problems”) to be used as a basis for “intelligent” algorithms. The intelligence is based on the software design allowing for the selection of appropriate algorithms based on performance metrics.

Amy Schoenecker, Assistant Professor of Politics, Economics, and International Studies, will use the funding for fieldwork in Mumbai, India to study the relationship between gender and the informal economy. Building on her previous research on the politics of street vending, this new project will use ethnographic methods to understand why female vendors earn less than men and will ask if women are politically active in ways that differ from male vendors.

Rachel Walker, Assistant Professor of History, will use her Coffin Grant to draft a new chapter for her book manuscript, which is tentatively titled *Beauty and the Brain: The Science of the Human Mind in Early America*. This chapter will focus on the connections between phrenology, female fashion, and the feminist movement in the mid-nineteenth century. It will reveal how both women’s rights activists and their critics used popular sciences to craft competing definitions of female intelligence.

CETA

Michael J. Crosbie, Professor of Architecture. will use the grant to research religious buildings designed by Slovenian architect Jože Plečnik (1872-1957), who created places of worship that reflect not only religious traditions, but transitions in architecture from Classicism to Modernism. Plečnik is a transitional figure. His work demonstrates a historical change in architectural design, one marked in his work by the tension between Classicism and Modernism. The grant will fund travel to Ljubljana, Slovenia, the birthplace of Plečnik, which contains the highest concentration of his religious architecture in the world.

Ameh Fioklou, Assistant Professor of Civil Engineering, will use this funding to evaluate the effect of external stressors on the deterioration mechanisms of highway bridge components. The involved degrading mechanisms adversely affect the resilience and sustainability of bridges, especially those subjected to multiple hazards. Furthermore, depending on the exposure conditions, structural capacity losses and serviceability issues are typically observed. This work aims to develop a holistic framework that is capable of considering the deteriorated state of bridges in prediction of structural responses under extreme loading conditions.

Suhash Ghosh, Associate Professor of Mechanical Engineering, will investigate the effects of 3-Dimensional surface roughness parameters on the internal pipe flow friction losses, specifically, height, functional, spatial and hybrid roughness parameters. The exact effect roughness has on fluid flow is not completely understood, but only a working estimate has been offered by a couple of researchers over the years. The proposed project will investigate correlation coefficients for various aerial surface roughness parameters, namely, S_a , S_p , S_z , S_{sk} , S_{ku} , S_{sm} , $S_{\Delta a}$ and W_a and develop an empirical model for modified effective roughness (to be used on the Moody diagram) based on parameters that exhibit strong relationships.

Eric N. James, Assistant Professor of Biomedical Engineering, will investigate the development and characterization of functionalized 3D implants for intervertebral disc/spinal cord injury repair. The goal of this project is to design an inexpensive, but biological and biomechanically functional implant using electric-conductive materials also known as ‘smart’ biomaterials that have the ability to deliver an electrical current to the cells, improving nerve regeneration and functional recovery of spinal cord injury.

ENHP

Sarah Hart, Assistant Professor of Special Education, will attend the Human Development and Capability Association Conference in Auckland, New Zealand from June 30 - July 2, 2020. She will present a paper on the transition out of school into young adulthood for individuals with significant disabilities. This paper will be part of a thematic group that considers how this and other educational matters are critical issues of social justice.

Hillyer

Fran Altvater, Associate Professor of Art History, will use the Coffin Grant award to help fund photography and publication rights in support of her book project, *Every Day: A Visual Culture History of Christianity from Classical Rome to the Present*. Her research examines works of art made for the devotion of common people, rather than the public, institutionally-sanctioned works seen in churches and commissioned by prominent patrons. Examining coins, rosaries, figurines, and a host of other small scale works, the book traces changes in worship that coincide with theological controversies, cultural interaction, and key issues of faith development over the history of Christianity.

Joyce Ashuntantang, Associate Professor of English/African Literature, will be traveling to Bucharest, Romania as an invited poet at the 24nd edition of the International Festival “*Curtea de Argeş Poetry Nights*,” July 08-14, 2020. Dr. Ashuntantang will not only perform her poetry across famed venues in Bucharest, her selected poems will be translated into Romanian and published in a bilingual anthology of poetry to be launched during the festival.

Rebecca M. Townsend, Assistant Professor of Communication, will use the funding to present research on US presidential and vice presidential rhetoric in Poland at the Association for Slavic, East European, and Eurasian Studies (ASEEES) convention. She will also deliver an invited lecture at the University of Warsaw regarding her research about civic life in Massachusetts towns, with specific attention on town meeting deliberation.

HAS

Billie Lee, Visiting Assistant Professor of Fine Arts, will travel to South Korea in late 2020 to conduct research for a new body of work on ritual and death from a pan-East Asian cosmological perspective. This research trip will focus on the visual culture of death rituals by visiting various shrines, temples, and museums dedicated to these themes throughout the peninsula. This research will inform a series of drawings, writings, and three-dimensional works that will be shown in two forthcoming solo-exhibitions in Honolulu and Los Angeles.

Matt Towers, Professor of Ceramics, will use this funding to purchase materials to make saturated colored, self-glazing, translucent porcelain clay bodies to create the next chapter in his series of vessels – “*Pansies*”. These vessel forms will be thrown on the potter’s wheel and altered using plaster stamps and molds. Though the forms will be vessels, they will resemble abstract pansies through coloration and manipulation of the materials.