



Grants and Sponsored Projects

Funding Year in Review

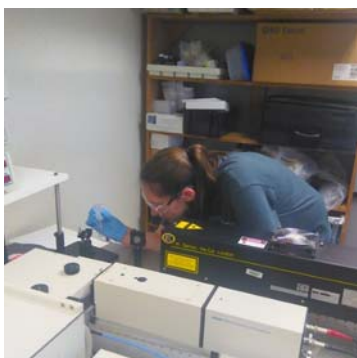
July 1, 2016 - June 30, 2017





Kutztown University Bringing Experiences About Research in Summer (KU BEARS)

The purpose of the KU BEARS program is to support faculty/student research pairs over the summer. The goals are twofold: to develop the necessary skill set of undergraduate students to help them become student researchers and to provide faculty members with paid student research assistants. Undergraduate students selected for the program will receive summer pay for research tasks assigned by a faculty supervisor. By assisting faculty members in their research, students selected for the program will learn the knowledge and skills necessary for conducting advanced research in their field.



Darren Achey

College of Liberal Arts & Sciences | Physical Sciences

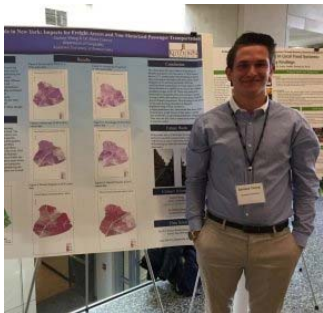
Jenna Kanyak

Major: Secondary Education - Chemistry

Determining the Characteristics of Nanoparticles on Thin Film Surfaces

Amount Awarded: \$2,000

Overview: Molecular reaction kinetics at nanomaterial-liquid interfaces are of great interest at both a fundamental level and in applications such as solar fuel devices. Systematic studies that provide the basis for how such reactions are altered, enhanced, or hindered at interfaces can be achieved by ensemble averaging within nanoparticle thin films. In this study, azobenzene derivatives are anchored to ZrO₂ nanoparticle thin films and the thermal, intramolecular isomerization from cis to trans isomer is monitored via UV-Vis spectroscopy. Results are compared to the same molecule in fluid solution and efforts have been made to mimic the chemical changes to the azobenzene derivative as a carboxylic acid undergoes an acyl substitution reaction upon surface attachment by deprotonating the carboxylic acid in fluid solution. In this way, differences in reaction kinetics that are solely a result of surface attachment can be isolated from other chemical factors within the molecule. Preliminary results indicate that deprotonation of the azobenzene derivative in fluid solution leads to smaller rate constants compared to the protonated form. Furthermore, attachment to the nanoparticle thin film increases the rate of the reaction, indicating that the interfacially anchored azobenzene experiences reaction dynamic modifications that can be separated from chemical changes that occur due to surface attachment.



Moira Conway

College of Liberal Arts & Sciences | Geography

Zachary Young

Major: Geography

The Changing Curbside in New York: Impacts for Freight Access and Non-Motorized Passenger Transportation

Amount Awarded: \$2,000

Overview: In many cities throughout the U.S., gentrification has brought new residential development in areas recently dominated by industrial uses such as manufacturing and warehousing. Many areas actively seek to retain these industrial activities among the growing residential population due to their employment opportunities. However, these new mixed use areas present a challenge for transportation planning: how can urban streets provide a safe, livable environment for pedestrians and bicyclists while maintaining adequate freight access required to support industrial land uses?

Through mapping and spatial analysis of demographic, employment, network, and transportation activity data from a case study area in Brooklyn, New York, this project aims to characterize the changing conditions for multi-modal transportation in a mixed residential-industrial area and to identify conflicts between different street user types. This project seeks to identify specific conflict areas in terms of both land use and infrastructure, and to provide recommendations for improving street design and regulation to balance these incompatible uses.



Kunal Das

College of Liberal Arts & Sciences | Physical Sciences

Jacob Christ

Major: Physics

Examining Topological Features of the Quantum Hall Effect with Trapped Ultracold Atoms

Amount Awarded: \$2,000

Overview: Jacob Christ worked on the topological features of the Quantum Hall Effect, focusing specifically on the fractal energy spectrum associated with it, known as the Hofstadter Butterfly due to its evocative repeating pattern. The spectrum, although well known for four decades in theory, has been challenging to implement and create in experiments. Jacob has worked with Prof. Kunal Das to find an easier and more effective way to do so in a novel system of ultracold atoms near absolute zero trapped in ring-shaped modulated lattices formed of lasers and magnetic fields. This research has not only proposed a new way for implementation, but also has

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(Kunal Das continued)

found the optimal parameters needed to create the delicate fractal pattern in the laboratory. There was also successful demonstration in simulations that an important associated theorem holds true even in the continuum, which predicts that the associated quantum eigenstates would undergo localization in certain parameter ranges. The research continued well beyond the summer, as Jacobs's interest and commitment to the project led to him to work to finalize and consolidate the results that he had helped generate. He is also participating in writing up the results for a paper soon to be submitted to one of the premier peer-reviewed journals of physics. Jacob's experience doing this research has motivated him to pursue a career in physics research as he plans to apply to enroll in a Ph.D. program in physics when he graduates.

Michael Davis

College of Liberal Arts & Sciences | Geography

Tianna Andrews

Major: Environmental Science / Geography

Assessment of Mid-Atlantic Atmosphere Instability, 2003-2012

Amount Awarded: \$2,000

Overview: Atmospheric instability is an indication of how unstable the atmosphere is at a given time. Depending on certain conditions, such as moisture content and temperature, the instability of the atmosphere can change potentially altering convection rates. Generally, an unstable atmosphere often indicates more variability in the weather (such as storms and other types of severe weather). Variables that affect the instability of the atmosphere include air temperature, specific humidity, and convective available potential energy (CAPE), which indicates the maximum energy available from an ascending air parcel. Cloud top pressure can be used to assess changes in the height of the deep convective anvils. These atmospheric variables were gathered from the Earth Systems Research Lab (ESRL), which is a part of the National Center of Atmospheric Research (NCAR) on a monthly period. The climate data was then partitioned into seasonal data and the summer (June-July-August) seasons from 2003 to 2012 for the Mid-Atlantic region of the United States were analyzed. By plotting this data in the IDL computer programming code, assessment into the trends of these atmospheric variables can cultivate a greater understanding of changes in atmospheric stability from 2003 to 2012.





Kaoutar El Mounadi

College of Liberal Arts & Sciences | Biological Sciences

Eric Coberly

Major: Biological Sciences

Antifungal Properties of Essential Oils Against Common Fungal Pathogens

Amount Awarded: \$2,000

Overview: Fungal pathogens are a serious threat to agriculture worldwide. Their effects range from causing mild symptoms to disasters in which large areas of cultivated crops are wiped out. Furthermore, fungal pathogens produce toxic secondary metabolites called mycotoxins that can induce mutagenic, immunosuppressive neurotoxic and carcinogenic effects in both humans and domestic animals. Despite the continued release of cultivars resistant to fungal pathogens and chemical fungicides, fungal pathogens remain difficult to control. Thus safe and effective antifungal agents are urgently needed in agriculture. Thirteen essential oils, castor oil, fenugreek oil, clove oil, peppermint oil, cinnamon oil, eucalyptus oil, fennel oil, thyme oil, clary sage oil and marjoram oil, for their ability to control the growth of the plant fungal pathogens *Botrytis cinerea* and *Fusarium graminearum*. Data show that all the tested oils displayed high antifungal activity against both pathogens. These data are very significant because they show that at least, in vitro, the essential oils can be used as biofungicides. The next step would be to see if the oils are able to prevent fungal infections in planta. The KU BEARS grant has offered a great opportunity for the student to learn techniques in microbiology, fungal biology, and plant pathology. As Eric Coberly is considering going to graduate school or working towards a career in laboratory research, this project has provided him with a better understanding of the research process and an opportunity to develop his critical thinking and oral and written communication skills.

“This project gave me the opportunity to see how the scientific method is carried out in an actual laboratory setting, and how scientists apply it every day. It also gave me the opportunity to see that research is something that I could see myself doing in my future career.”

-Eric Coberly



Lisa Frye

College of Liberal Arts & Sciences | Computer Science & Information Technology

Nina Schnyder

Major: Computer Science

Environmental Sensing with Wireless Sensor Networks

Amount Awarded: \$2,000

Overview: This research project utilized Wireless Sensor Networks to perform environmental sensing in a small geographic region. Initial research was conducted to study past projects utilizing Wireless Sensor Networks, including deployment and data collection strategies, as well as lessons learned. The Wireless Sensor Network (WSN) for this research consisted of two sensors that collected data about the environment. Specifically, humidity, temperature, wind speed, and barometric pressure data were collected. The configuration and operation of each piece of hardware was acquired. The WSN was initially deployed indoors, to learn the capabilities and performance of the sensors and base station (the weather station which collected the data from the sensors). The WSN was then moved outdoors and data were collected for several weeks. Properties of the hardware were analyzed, such as the optimal distance from the base station to the sensors, and the frequency of data collection by the base station. This research was the initial step to a larger research project, which will be to examine changes in avian populations as well as the number of different species that could reside in the local Kutztown region. As temperature and moisture can affect food supply, suitable habitat, and comfort levels, understanding how the climate affects bird species are integral to this study. The ultimate goal will be to assess what bird species frequent this area and how the populations change over time as a result of an ever-changing climate.



Alexander Hernandez

College of Liberal Arts & Sciences | Biological Sciences

Jenna Ruoss

Major: Environmental Science / Biology

Assessing Terrestrial Vertebrate Biodiversity and Population Density at North Park (Berks County, PA)

Amount Awarded: \$2,000

Overview: This project assesses the biodiversity of vertebrate animals visiting Sacony Creek at North Park (Borough of Kutztown, Berks County, PA). Trail cameras, animal tracks, fecal pellet counts and direct observations were used to document the diversity of terrestrial vertebrate animals (mammals and birds) visiting Sacony Creek, as well as estimate the density of each species. Cameras revealed 6 mammal and 1 bird species visited the creek, including white tail deer, raccoon, opossum, gray squirrel,

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groundhog, domestic cat, and wild turkey. A presence index based on the number of photographs of each species captured suggested that white tailed deer were the most common. The tracks identified and counted were for deer and raccoons only, and the density estimated from these data suggest numbers are higher than what has been reported in other areas of Pennsylvania and the country. Fecal pellets did not provide enough data to estimate reliable densities of species, or the diversity of parasites with potential links to the creek. Bird surveys showed a lower number of species than previous census data collected by KU faculty and students. Overall, the results of this summer demonstrate the usefulness of a variety of methods in assessing the biodiversity in riparian zones surrounding a local wetland.

Matthew Junker

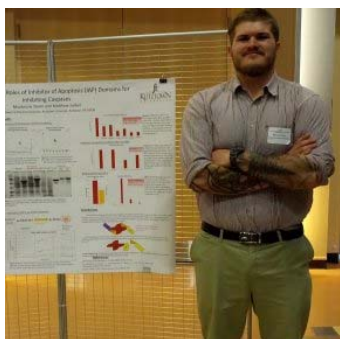
College of Liberal Arts & Sciences | Physical Sciences

Mackenzie Storm

Major: Biochemistry

Mechanism for Caspase Inhibition in Apoptosis by Inhibitor of Apoptosis Proteins (IAPs)

Amount Awarded: \$2,000



Overview: This project investigated the biochemistry of apoptosis (programmed cell death). Apoptosis is a process in all animals that safely removes unneeded or potentially harmful cells. Apoptosis dysfunction can lead to cancer and some neurodegenerative diseases. Apoptosis requires caspase enzymes. These enzymes are kept inhibited (“turned off”) in living cells by inhibitor of apoptosis proteins called IAPs. Each IAP contains multiple domains. To determine the role of each domain in regulating caspases, we tested different fragments from the *Drosophila* IAP DIAP1 for inhibiting a *Drosophila* caspase. All of the proteins and fragments were expressed in and purified from *E. coli* and tested in an *in vitro* caspase activity assay. DIAP1 contains two BIR (baculovirus IAP repeat) domains separated by an intervening linker. The linker is known to directly bind and block the caspase active site but the roles of the BIR domains are less clear. It was found in the caspase activity assay that attaching either BIR domain enhanced caspase inhibition by the linker while the BIRs themselves showed no inhibition. However, one of the BIRs interfered with caspase inhibition by a BIR-linker fragment. This BIR may function in DIAP1 by binding outside the caspase active site to enhance linker binding. The other BIR did not show such interference suggesting it has a different role in caspase inhibition which is under continued investigation. Understanding the roles of the different IAP domains could reveal new ways to target IAPs and caspases for treating diseases where apoptosis dysfunction occurs.



Yoon Mi Kim

College of Liberal Arts & Sciences | Social Work

Alexandria Blackman

Major: Social Work

Hailey Fleishman

Major: Social Work

Understanding and Reducing Student Departure in the Social Work Program: Empirical Assessment of Student Retention

Amount Awarded: \$2,000

Overview: Two sophomore social work students have collected primary data by conducting a retrospective survey among KU social work students enrolled between 2015 and 2017 to investigate the relationships among social integration, scholastic conscientiousness, perceived discrimination, and student retention. Student retention data on the social work program suggests that the overall enrollment decreased 20% in the fall 2016 from the previous fall. In addition, about 90% of freshmen minority students in the social work program left during or after their sophomore year in the last 5 years. Through the KU BEARS summer project, the two students conducted extensive library research on student retention, and collected survey data. The research findings will be used to help KU faculty, social work educators, and administrators to develop and create effective interventions and approaches in the promotion of student success, and to understand potential protective and risk factors for attrition.



Khori Newlander

College of Liberal Arts & Sciences | Anthropology & Sociology

Carly Plesic

Major: Anthropology & History

Danielle Cannon

Major: Anthropology

Documenting Socioeconomic Variability in an Early-19th Century Milling Village in Northeastern Pennsylvania

Amount Awarded: \$2,000

Overview: Over the last 200 years, the United States was transformed from a mostly rural and agricultural society to a largely urban and industrial society. Historical studies of this period of dramatic socioeconomic transformation commonly focus on the lives of famous people. This project, in contrast, seeks to tell the stories of the “invisible” men and women who lived and worked at Stoddartsville, a 19th-century milling village built along the upper Lehigh River. In particular, we seek to understand: (1) the role of socioeconomic status and ethnicity in structuring work and life at

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Stoddartsville, and (2) the connections established between Stoddartsville and the surrounding area as the villagers participated in the burgeoning regional economy. To this end, the Kutztown University Archaeology Field School has conducted excavation during the last three summers in the general store, workers' cottages, and Stoddart mansion. During the 2017 field season specifically, Carly Plesic and Danielle Cannon led field crews in excavating different rooms of the Stoddart mansion. Ongoing comparison of artifacts obtained from the mansion and the workers' cottages will shed light on the socioeconomic and ethnic variability that characterized Stoddartsville as it developed into a short-lived center of industry and trade in northeast Pennsylvania.

Amy Pfeiler-Wunder

College of Visual & Performing Arts | Art Education & Crafts

David Lescalette

Major: Art Education & Crafts

Melanie Weidner

Major: Art Education & Crafts



Social Justice Pedagogy for K-12 Educators

Amount Awarded: \$2,000

Overview: We, as educators come to art education settings with our own collections of lived experiences and sets of cultural assumptions, and so do our learners. Through the KU BEARS grant, Art Education students, David Lescalette and Melanie Weidner, worked with Dr. Amy Pfeiler-Wunder in preparation for her book on social justice pedagogy. The research for this book will empower educators to reflect upon intersections of their own identities and cultural assumptions, seek to learn about their learners' identities that are often (re)constructed and performed, and critically engage with the multi-layered educational landscapes that are informed by time, place, and context within the metanarrative of social, political and historical contexts of what it means to "educate" an individual. With this in mind, the book inspires sites of possibility for deep and meaningful learning by featuring stories of educators and learners in a range of educational settings both inter/nationally. Employing both theory and practice, the goal of this research is to help educators cultivate a responsive curriculum that empowers learners to see themselves as integral agents of change in a society where learners may feel "othered," "disadvantaged" or "unheard." Melanie and David conducted an extensive literature review to establish the philosophical and theoretical underpinnings for the book, researched visual artists focused on social justice and completed the IRB training. The highlight of their research project culminated in a scholarly presentation at the Pennsylvania Art Educators Conference in Pittsburgh, PA.



Thiep Pham

College of Liberal Arts & Sciences | Computer Science & Information Technology

Braden Luancing

Major: Computer Science

Kutztown University: The Game!

Amount Awarded: \$2,000

Overview: For prospective students, understanding what a school has to offer, how it appears and how it works are important things to know. Incoming freshman may also feel intimidated by the unknown and they may wish for a way to further prepare for their college experience. Technology can provide the understanding that these students need anywhere and in a format that can be enjoyable and engaging. *Kutztown University: The Game!* aims to provide the video gaming generation a virtual walk-through of Kutztown University and an introduction to the college experience through the lens of a video game. Prospective students and incoming freshman will have an opportunity to virtually explore the campus and manage their time to attend classes. By virtually engaging in “a day in the life” of a student, players will learn the layout and beauty of the campus and understand the challenges of a KU student in a format that appeals to the technology-focused generation.

Paul V. Quinn Sr.

College of Liberal Arts & Sciences | Physical Sciences

Malik Thomas

Major: Physics

Performance Characteristics of Photo-voltaic Cells Exposed to Thermal Shock

Amount Awarded: \$2,000



Overview: The use of solar cells has continued to increase at a nearly exponential rate since their early incorporation into the space program. The overall worldwide capacity of photo-voltaic systems reached just under 230 gigawatts in 2015. While solar energy is a promising form of green technology on earth useful for reducing the consumption of fossil fuels, the extraction of solar energy from photo-voltaic cells in space-based applications is a near necessity. Both terrestrial and space based applications will subject solar cells to large temperature variations. On earth, only a small portion of the electromagnetic energy from the sun, mostly in the visible spectrum, is used in the generation of electricity while the remainder is absorbed as heat. In space based applications, the lack of an atmosphere subjects the solar cells to extreme thermal variations on a regular basis.

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(Paul Quinn continued)

In this study, we investigate the performance characteristic of mono-crystalline silicon photo-voltaic cells subjected to high and low temperature thermal shock as compared to baseline measurements of the unaltered cells. When designing solar energy systems, this information will help to predict the performance of solar cells over the lifetime of the cell, rather than relying solely on performance characteristics of the pristine cell. This project can be broken down into fundamental tasks or mini-projects that are necessary for the completion of the overarching goal. One such mini-project was the design of an apparatus to thermally shock the solar cells along with an experimental process conducted on each on the cells. This required the use of engineering and design skills to create a system and a process that shocks the cells without damaging them.

Liquid nitrogen was used to shock the system under extremely cold temperatures and a high temperature industrial oven will be used to shock them under extremely high temperatures. For the low temperature experiments, students showed that there was a slight increase in performance of the cells after being shocked with liquid nitrogen for various amounts of time. More studies are needed to determine the exact nature of the relationship.

For the cells subjected to extreme heat, students were able to determine a relationship between the change in the fill fraction of the photo-voltaic cells as a function of the temperature for with a maximum heating at 275 K. The results showed that cells subjected to extreme heat showed an improvement in performance before breaking down at temperatures higher than 265 K.

Wendy L. Ryan

College of Liberal Arts & Sciences | Biological Sciences

Celina Dickison

Major: Marine Science / Biology

Evaluating Metabolic Rates of Marine Zooplankton

Amount Awarded: \$2,000

Overview: Zooplankton form the base of aquatic food webs by linking producers and higher-level consumers. However, in spite of the importance of these organisms to the energetics of aquatic communities, there have been few actual measurements of their metabolic requirements. This project had three main objectives: 1) to expand the diversity of zooplankton represented in baseline measurements of metabolic rate; 2) complete data collection on the change in O₂ use by zooplankton exposed to increased hydrostatic pressure; and 3) to assess the response of shore shrimp (*Palaemonetes* spp) to variable salinities. We collected baseline data on the metabolic rate of more than 80 additional individual zooplankton, most representing soft-bodied organisms previously not well represented in the



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data set. In addition, nearly 400 new data points were added to the study of the response of zooplankton to increased hydrostatic pressure. There is a substantial amount of analysis still to be done, but the body of work represented enhances our current understanding of zooplankton physiology and should be published. The remaining objective was also met, as we were able to collect data documenting the minimal change in metabolic rate for juvenile shore shrimp, even when exposed to salinities as low as 10 ppt and as high as 45 ppt. These results were unexpected, but suggest that this group of organisms may be particularly resilient in the face of climate change.

Christine Saidi

College of Liberal Arts & Sciences | History

Kathleen O'Neill

Major: Secondary Education – Social Studies

Expressions and Transformations of Gender, Family, and Status in Eastern and Central Africa, 500-1800 CE

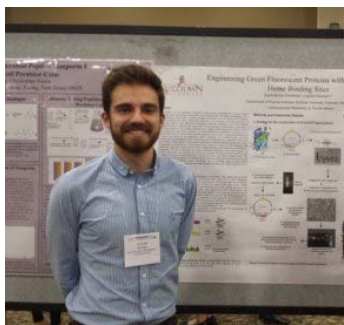
Amount Awarded: \$2,000

Overview: This summer Dr. Saidi did field research for over seven weeks in Zambia and the Democratic Republic of the Congo as part of a National Endowment for the Humanities grant. When she returned to KU, KU BEARS student, Kathleen O'Neil, helped Dr. Saidi organize and analyze hundreds of archival documents, copies of African language dictionaries, photographs and audio tapes of interviews. While they were able to completely organize the research, they also spent time discussing why certain interviews or documents or handwritten dictionaries were important for the research. Dr. Saidi and her student were able to scan and upload to Google Docs all of Dr. Saidi's archival work to make it accessible to her other colleagues. The experience allowed Dr. Saidi to be able to begin to analyze the massive amounts of evidence she had found in Africa, but it also generated in Kathleen a new understanding of how historians gather evidence and write history.

"This experience has surpassed my expectations because I did not realize that I would learn so many different skills while learning about new topics. I truly enjoyed working because there was something new to learn every day."

-Kathleen O'Neill





Carsten Sanders

College of Liberal Arts & Sciences | Physical Sciences

David Nunez Contreras

Major: Biochemistry

Engineering Green Fluorescent Proteins with Cytochrome *c* Heme Binding Sites

Amount Awarded: \$2,000

Overview: Cytochrome *c* is an ubiquitous electron carrier protein essential for various cellular processes such as energy transduction and programmed cell death (apoptosis). As a functional form, cytochrome *c* contains at least one heme (iron protoporphyrin IX) cofactor that is covalently and stereospecifically attached to the cysteine sulfhydryl groups of a conserved CXXCH motif within the polypeptide substrate. Multiple evolutionarily distinct biogenesis (Ccm) systems that accomplish the production of functional cytochrome *c* have been defined. One of these systems (Ccm system III) is confined to mitochondria of fungi, metazoans and some protozoa. In natural cellular environments, it includes one or two components with heme lyase activities towards cytochrome *c* protein substrates, and a heme reductase as an accessory factor. However, in a heterologous bacterial (*Escherichia coli*) expression host, it has been shown that the Ccm system III component cytochrome *c* heme lyase (CCHL) alone is sufficient to form functional cytochrome *c* upon coexpression. Furthermore, it has been found that an 18 amino acid residues long consensus sequence (including the CXXCH motif) within the cytochrome *c* polypeptide (CCCS) is required for protein substrate recognition and heme ligation by CCHL. In this work, we inserted this CCCS into a green fluorescent protein (GFP) model at five different positions (amino-terminus, carboxy-terminus, and three internal loops). We generated data suggesting that these insertions abolish the fluorescent properties of all constructed protein fusion derivatives, but that three of these five protein fusion derivatives can be covalently and stereospecifically attached with heme molecules upon coproduction CCHL.



Justin L. Smoyer

College of Liberal Arts & Sciences | Physical Sciences

Qu-dir McKendrick

Major: Physics

Performance Characteristics of Photo-voltaic Cells Exposed to Thermal Shock

Amount Awarded: \$2,000

Overview: The use of solar cells has continued to increase at a nearly exponential rate since their early incorporation into the space program. The overall worldwide capacity of photo-voltaic systems reached just under

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(Justin Smoyer continued)

230 gigawatts in 2015. While a promising green technology on earth to help reduce the consumption of fossil fuels, the extraction of solar energy from photo-voltaic cells in space based applications is a near necessity. Both terrestrial and space based applications subject solar cells to large temperature variations. On earth, only a small portion of the electromagnetic energy from the sun, mostly in the visible spectrum, is used in the generation of electricity while the remainder is absorbed only as heat. In space based applications, the lack of atmosphere subjects the solar cells to extreme thermal variations on a regular basis. In this study, the performance characteristic of silicon photo-voltaic cells subjected to high temperature thermal shock was characterized. The results of this study have shown that it is possible to improve the efficiency of standard silicon solar cells through thermal annealing. When designing solar energy systems, this information will help to predict the performance of solar cells over the lifetime of the cell, rather than relying solely on performance characteristics of the pristine cell and provide an avenue to increase the efficiency of already produced solar cells.

Matthew Stone

College of Liberal Arts & Sciences | Biological Sciences

Haley D'Agostino

Major: Biology

Emily Schallmo

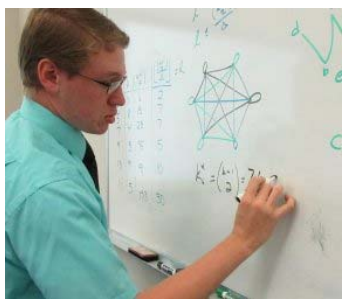
Major: Biology

Factors Influencing the Timing and Location of Diamondback Terrapin Nesting Activity

Amount Awarded: \$2,000

Overview: Diamondback terrapin (*Malaclemys terrapin*) populations face a variety of anthropogenic threats throughout their range. Of particular concern is the potential effects of climate change on terrapin habitat quality and breeding success. The goal of this study is to investigate the effects of various environmental factors on the reproductive biology of terrapins in the mid-Atlantic region. During summer 2017, we monitored terrapin nesting activity at Wallops Island, VA. Specifically, we compared environmental data (e.g., temperature, salinity, tidal patterns, and rainfall) to breeding behaviors of terrapins (e.g., timing of nesting, location of nest, number of eggs laid) to determine which environmental variables are the most important causal factors on those behaviors. Additionally we collected basic morphometric data from approximately 200 nesting diamondback terrapins. This research provides important baseline data that will be useful in predicting the future impacts that climate change will have on terrapin populations. These are essential data for conservationists to make effective decisions for management of this species.





Wing Hong Tony Wong

College of Liberal Arts & Sciences | Mathematics

Grant Fickes

Major: Mathematics

Edge-distinguishing Chromatic Number for Graphs

Amount Awarded: \$2,000

Overview: This project is related to vertex coloring in graph theory. In graph theory, a “simple graph,” denoted as G , consists of vertices and edges, where each edge connects two distinct vertices. Graph theory is especially useful for simulating networks, so it is closely related to computer science and operations research.

In this project, we color the vertices of G by literally assigning one color per vertex, and different vertices may or may not share the same color. Once the vertices are colored, each edge will then be labeled by the colors of the two vertices it connects. For example, if an edge connects a red vertex and a blue vertex, then this edge is labeled by $\{\text{red}, \text{blue}\}$.

We call the coloring of G “edge-distinguishing” if all the edge labels are distinct, and the minimum number of colors that we need to create such an edge-distinguishing coloring is called the “edge-distinguishing chromatic number” (EDCN) of G . In previous literature by Al-Wahabi et al., the EDCN was found when G was a path or a cycle. In this project, we studied the EDCN for other graphs. One of our key results was to determine the EDCN for certain graphs that are made up of paths meeting at a central vertex.

“This research experience exceeded my expectations. It has allowed me to apply the ideas I learn in class to real problems that mathematicians face all the time. I would recommend the KU BEARS summer research program to any student remotely interested in research here at Kutztown.”

-Grant Fickes

Kutztown University Research Committee Funding

The Kutztown University Research Committee provides funding to support research, scholarly activity and professional development. The maximum award is \$8,000.



Kunal Das

College of Liberal Arts & Sciences | Physical Sciences

Creating Fundamental Topological Models with Ultracold Atoms

Amount Awarded: \$8,000

Overview: Some of most innovative physics research in recent decades has been driven by the effects of non-trivial topological structures on quantum states. However, many of the seminal models assume closed system boundary conditions, as in a ring or a torus. Despite providing critical insights in the context of effects such as quantum Hall currents in electronic systems, such configurations do not naturally occur in nature and it has been challenging to fabricate them with solid state systems that rely on the motion of charged particles like electrons. This project will provide a novel way to realize and study those models with neutral ultra-cold atoms trapped in multiply-connected magnetic and optical traps with lattice structures.



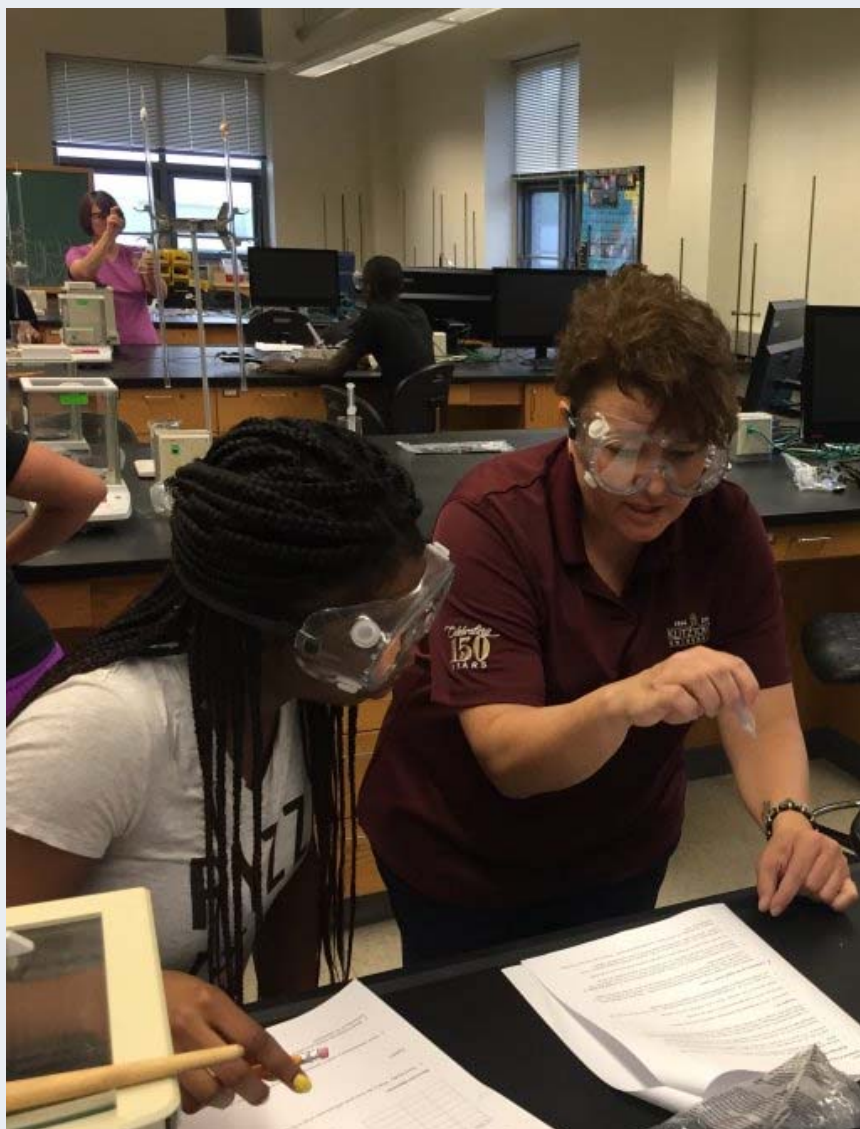
Michael D. Gambone

College of Liberal Arts & Sciences | History

US-Nicaraguan Relations from 1972-1992

Amount Awarded: \$3,146

Overview: Funding will be used to visit several archives to research US-Nicaraguan relations from 1972-1992. The National Archives and Records Administration in College Park, Maryland and Records Group 59, General Records of the U.S. Department of State will be visited to review policy documents that illustrated U.S. approaches to national security, foreign economic and political affairs, and the application of these policies to Latin America and Nicaragua, specifically during the Reagan era. The George H.W. Bush Presidential Library in College Station, TX as well as the Archivo Nacional in Managua, Nicaragua will be visited to help gain additional insights regarding key policy makers and their decision making process as foreign affairs moved into the nineties. Spanish language documents from the Sandinista government archives offer an important balance to histories that are too often dominated by the U.S. perspective on diplomacy.



Alexander D. Hernandez

College of Liberal Arts & Sciences | Biological Sciences



Parasite Communities as Indicators of Environmental Disturbance in Stream Ecosystems

Amount Awarded: \$8,000

Overview: Freshwater ecosystems around the world are often overused and undervalued natural resources, and the need to better manage them is becoming urgent. Monitoring biological communities can help maintain healthy freshwater ecosystems by providing baseline information to better assess any potential future changes. Parasites are increasingly being considered sensitive biological indicators of ecosystem health because parasite life cycles necessitate vertebrate hosts, such as fish, and invertebrate hosts, such as snails and aquatic insects. Changes in environmental conditions that affect any hosts, directly or indirectly, could have a significant effect on the incidence of infection. This project aims to measure the incidence of parasitism in fishes and aquatic insects from tributaries of the Maiden Creek watershed to provide data on animal community structure (i.e. number and types of species) that can then be used to assemble food webs and develop relative indices of ecosystem health. The ultimate goal is to develop a community and ecosystem approach to understanding the biology of parasites naturally infecting wildlife populations in the context of biological integrity of stream ecosystems.

Yun Lu

College of Liberal Arts & Sciences | Mathematics

Francis Vasko

College of Liberal Arts & Sciences | Mathematics



The Multi-Demand Multidimensional Knapsack Problem (MDMKP)

Amount Awarded: \$7,715

Overview: In this study, we efficiently generate near-optimal solutions to the MDMKP. This *metaheuristic*, called Jaya, was introduced in 2016 to solve continuous nonlinear engineering design problems. Since the MDMKP is a binary optimization problem, we made modifications to the Jaya metaheuristic in order to effectively solve the MDMKP. For test purposes, we use 810 large MDMKP instances available to researchers on the website of OR-library. In this project, we are going to report empirical results we obtained from solving these 810 MDMKP instances using our new Jaya-based metaheuristic approach. Our results will be compared to the optimal (if known) or best known results for these problems.

Andrew Mashintonio

College of Liberal Arts & Sciences | Biological Sciences



Why Do the Sheep Cross the Valley?

Amount Awarded: \$7,916

Overview: As habitat availability in the southwestern United States declines, it is becoming more important to understand the habitat requirements of resident animal populations, particularly populations of desert bighorn sheep (*Ovis Canadensis*). Observations of sheep movements within Joshua Tree National Park revealed that two individual females made routine trips to a nearby mountain range that lacks any documented permanent water sources. This was unusual given that female bighorn sheep typically remain near freestanding water and rarely cross low elevation valleys. The objective of this study is to explain why these individuals travel to this nearby mountain range and to evaluate the suitability of this range as potential habitat for bighorn sheep. Known drivers of sheep movement include freestanding water, elevation, ruggedness, and vegetation cover, though vegetation can be difficult to map in arid environments. Using conditional logistic models, different measures of vegetation and soil moisture will be evaluated as potential predictors of sheep movement.

Dale Parson

College of Liberal Arts & Sciences | Computer Science & Information Technology



Visualization and Sonification of Data in a Planetarium

Amount Awarded: \$7,999

Overview: Dr. Parson was one of six attendees accepted to participate in the second Spatial Sound Workshop in Virginia Tech's Cube, a 140-speaker immersive performance environment in Tech's Moss Arts Center, during August of 2016. The five-day workshop culminated in the premiere performance session of the now-annual Cubefest, a three-day, international concert event. Dr. Parson applied knowledge gained from the workshop in this grant proposal for an eight-speaker PA system that he is using to perform research into spatial music software. Dr. Parson has been using the system to prepare a spatial music composition for submission to Cubefest 2018. He also used the system in preparing for an April 1, 2017 concert in the Kutztown Planetarium. This free event included performances by faculty members and students from five University departments. The featured guest was regional musician Ken Gehret. Mr. Gehret has earned renown as a multi-genre multi-instrumentalist over the last 50 years in Berks County.



Wendy L. Ryan

College of Liberal Arts & Sciences | Biological Sciences

Examining Zooplankton Energetics in Response to Environmental Change

Amount Awarded: \$7,922

Overview: Zooplankton form the base of aquatic food webs by providing an important link between producers and higher-level consumers. However, in spite of the importance of these organisms to the energetics of aquatic communities, there have been few actual measurements of their metabolic needs. Dr Ryan has been using a Microrespirometer developed at KU that can measure the O₂ consumption of individual zooplankton. She has been using this instrumentation to study the impact of high hydrostatic pressures on the metabolism of individual zooplankton in response to unresolved questions in this area. However, over the past two summers Dr. Ryan has also worked with three different students to begin to document the response of zooplankton to aspects of climate change. Data now represents evaluations of the response of diverse crustacean larvae to hypoxic (low O₂) conditions and changing salinity, both of which have been linked to climate change. Data are being analyzed from summer 2017 for presentation at professional meetings and the preparation of at least two manuscripts.



Ed Simpson

College of Liberal Arts & Sciences | Physical Sciences

Decoding Salt Tectonics during the Early Cretaceous Cedar Mountain Formation Deposition, Arches National Monument, Utah

Amount Awarded: \$7,900

Overview: Fieldwork was conducted in March and August, 2017 in and around Arches National Park area. The Early Cretaceous (125 million-year old) Klondike Buff sandstone of the Cedar Mountain Formation has been investigated extensively using detailed photography, photomosaics, measured stratigraphic sections, and thin section investigation. The preserved river system is a conglomeratic low-sinuosity and braided that has several stacked channels. Because of its grain size, trace fossils were not developed in this rock unit. Exploration in other older units has produced a variety of invertebrate traces including a spectacularly preserved nest structure of dung beetles. This is the oldest dung beetle nest ever documented and supports recent molecular modelling that predicted that dung beetle behavior coevolved with the evolution of dinosaurs and angiosperms, flowering plants.



Juliana Svistova

College of Liberal Arts & Sciences | Social Work

Lindsay Fernandez

College of Liberal Arts & Sciences | Social Work

Barriers to Substance Abuse Treatment in Berks County, Pennsylvania

Amount Awarded: \$8,000

Overview: In the past few years rural Pennsylvania has been experiencing heroin epidemic and unprecedented high overdose rates. The deficiencies in the service provision for persons recovering from substance abuse if unchecked leave this population vulnerable to a growing prevalence of reported heroin addiction and overdose. This study explored the barriers to substance abuse treatment in rural Pennsylvania through in-depth interviews with service providers and service users.

Data analysis revealed three common themes around barriers to treatment: 1) “fail first” approach, health insurance, and high cost of treatment; 2) large caseloads, staff burn out, and turnover; and 3) the lack of public transportation. Insurance barriers and cost of treatment were cited as obstacles that prevented individuals from accessing treatment based on rules, regulations, and standards provided by insurance companies or that arose due to a lack of insurance access. Almost all of the participants discussed the complicated process of navigating the treatment access and low levels of organizational preparedness to address the epidemic. Given the rural context of this study, the access to transportation was also widely discussed as a significant barrier to treatment.

Glenn Walters

College of Liberal Arts & Sciences | Criminal Justice

Jonathan Kremser

College of Liberal Arts & Sciences | Criminal Justice

Lindsey Runell

College of Liberal Arts & Sciences | Criminal Justice

Psychosocial Correlates of Bullying in Middle School Students: A Longitudinal Examination of Perpetrators and Victims

Amount Awarded: \$6,000

Overview: The purpose of this study is to examine the psychosocial correlates of bullying in middle school students. The study will cover bullying as it relates to both victims and perpetrators. Measures of parental support,



continued

(Glenn Walters continued)

parental monitoring, proactive antisocial cognition, reactive antisocial cognition, peer deviance, depression, delinquency, and bullying will be administered to sixth grade middle school students. Follow-up evaluations, involving re-administration of all measures will be conducted one (Grade 7) and two (Grade 8) years after the initial evaluation. Participants in this study will consist of students from J. T. Lambert Intermediate School (JTLIS) in East Stroudsburg, Pennsylvania. There will be two cohorts of students from JTLIS who will be asked to complete a questionnaire at three points in time (waves), with one year between waves. Data collection for this study began in November 2016 and should be complete by November 2019.

Todd Williams

College of Liberal Arts & Sciences | English

Christina Rossetti's Environmental Consciousness **Book Project**

Amount Awarded: \$1,040

Overview: Dr. Williams is working on a book about the Victorian poet, Christina Rossetti. Grant funding was used to make several trips to Bryn Mawr College and Princeton University, which both have many rare materials on Rossetti. They also house the Christina Rossetti Collection of Mary Louise and Frederick E Maser, which contains manuscripts and other materials. Princeton houses thirty-three folders of manuscripts and notes by Rossetti in the Janet Camp Troxell Collection. This includes some proposed new chapters to her book *Time Flies* that were never published and some errata for her book *Face of the Deep*. Princeton's library also has a separate special Christina Georgina Rossetti Collection containing letters and notes. Dr. Williams was able to include many of these essential materials in his book.

"Research is formalized curiosity. It is poking and prying with a purpose"

-Zora Neale Hurston



Ju Zhou

College of Liberal Arts & Sciences | Mathematics



S-Hamiltonian Line Graphs and Pancyclicity of Claw-free Graphs

Amount Awarded: \$4,597

Overview: An automorphism of a graph is a change of the vertex set. The pair of vertices form an edge if another pair also forms an edge. A perfect matching transitive graph is a graph such that for any two perfect matchings M and N of G , there exists an automorphism of G such that $f(M) = N$. What kinds of graphs are perfect matching transitive? What is the relationship between perfect matching transitive and vertex transitive? What is the relationship between perfect matching transitive and edge transitive? Dr. Zhou first proposed the definition of the perfect matching transitive graphs and then did extensive research addressing the questions asked above.

"To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science."

-Albert Einstein

Kutztown University Research Committee Facts

The Research Committee awarded \$89,668 in grants to 16 faculty members (12 awards). Research was funded in the following disciplines: English, mathematics, social work, criminal justice, biology, geology, computer science, history, and physics.

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Received	28	19	28	21	26	14
Awarded	21	17	20	12	17	12
Total Requested	\$ 178,596	\$ 100,940	\$ 144,454	\$ 111,044	\$ 137,654	\$ 89,668
Total Awarded¹	\$ 86,266	\$ 82,421	\$ 87,236	\$ 64,079	\$ 96,976	\$ 78,235
Annual Funding Available	\$ 75,783	\$ 75,783	\$ 75,783	\$ 75,783	\$ 75,783	\$ 75,783

1. Total Awarded may exceed Annual Funding Available due to the return of grant funding not expended from prior awards.

Kutztown University Undergraduate Research Committee Funding

The Undergraduate Research Committee primarily supports laboratory or field research, as well as research projects in the arts, humanities, and computer science. Funding is available for undergraduate students who plan to conduct research and/or present their research at conferences or research symposiums. The committee awarded 52 students funding, for a total of \$33,521.

	SUBCOMMITTEES		TOTAL
	Science	Arts & Humanities	
Awarded	34	18	52
Total Awarded	\$ 24,705	\$ 8,816	\$ 33,521



EXTERNAL FUNDING



Christine Atiyeh

College of Visual & Performing Arts | Art & Art History

“Re-excavating Carthage” Digitization and Publication of the White Fathers’ Archive (Rome)

Funding Source: Loeb Classical Library Foundation

Amount Awarded: \$8,000

Overview: This application was made in order to make an accessible online archive of approximately 2,500 photographs and 10,000 folios of letters, field notes, diaries, and other textual materials documenting the excavation of Roman and early Christian objects and sites. These materials were believed to be owned by Father Alfred-Louis Delattre and the White Fathers in Carthage, Tunisia from 1875 to 1956.



Peter Bond

Division of Enrollment Management

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP-3)

Funding Source: U. S. Department of Education

Amount Awarded: \$118,889

Overview: The GEAR UP Program continued to provide college and career readiness services to students in the Allentown School District and the other GEAR UP school districts during school year 2016-2017. Highlights from the school year included hosting a spring Parent/Guardian Day at Kutztown University. Over 100 students and parents from the Allentown School District visited Kutztown University to learn more about the university as well as participate in interactive workshops with current Kutztown students. Additionally, throughout the year, Kutztown University offered special campus visits for GEAR UP students focused on topics such as: succeeding as a student-athlete in college, art related careers, college majors, and learning non-cognitive skills to encourage resiliency and persistence. Trained Kutztown University students also served as mentors and provided mentoring to over 300 10th grade Allentown School District students for at least two hours per student.



Paige Brookins

Division of Academic Affairs | Center for Academic Success & Achievement

Act 101

Funding Source: Pennsylvania Higher Education Assistance Agency
Amount Awarded: \$32,350

Overview: The purpose of Act 101 funding is to support Pennsylvania students who have an academic and financial need. The Act 101 program at Kutztown University serves fifty full-time students. The program collaborates with campus offices to create a student success culture that assists in their completion of a college degree. The services provided include: personalized academic support; academic advising/coaching counseling; tutoring; and workshops on a variety of subjects such as time-management, note taking, test taking, study skills, leadership experience, and assistance with financial aid. Kutztown University's Act 101 program assists students to transition and adjust to the demands of college life and provides the extra support necessary for their academic success at Kutztown University.

Kerri Cebula

College of Business | Sport Management & Leadership Studies

Gear Up: Kutztown University Sport Management Camp

Funding Source: U. S. Department of Education
Amount Awarded: \$956

Overview: The GEAR UP Program and Professor Kerri Cebula partnered to provide a one-day "Careers in Sports" summer camp for students from the Norristown School District GEAR UP Program. Visiting students had the opportunity to learn more about Kutztown's Sport Management Program through interactive sessions with professors and current students. Additionally, students also had the opportunity to speak with recent Kutztown University graduates who are working in the sport management field. Kutztown University alumni currently working for the Philadelphia Eagles, Pocono Raceway and DeSales University returned to campus to speak with students and answer questions about careers in sports.





Kunal Das

College of Liberal Arts & Sciences | Physical Sciences

RUI: Topology, Gauge Fields and Phase Coherence in the Transport Dynamics of Ultracold Atoms

Funding Source: National Science Foundation

Amount Awarded: \$23,868

Overview: The goal of this research is to analyze several novel phenomena in systems of ultracold atoms, comparatively from a topological perspective. The method will be to recast them as generalized transport problems, tracking how the system and its parameters evolve in time, which will then be related to dynamical experiments with cold atoms. The study will involve the intrinsic quantum characteristic of phase in the context of creating gauge fields associated with varying local phase, and coherence effects associated with quantum systems.



Kaoutar El Mounadi

College of Liberal Arts & Sciences | Biological Sciences

Screening Essential Oils for Potential use as Bio Fungicides and Ability to Inhibit Mycotoxin Production

Funding Source: Pennsylvania State System of Higher Education

Amount Awarded: \$5,000

Overview: This project proposes to screen commercially available essential oils for their antifungal activity against a wide range of fungal pathogens in vitro. The project will also determine the effects of the tested essential oils on the biosynthesis of mycotoxins by mycotoxigenic fungi. Finally, the project will test the ability of the essential oils to provide protection against fungal infections in plants.



Johanna Forte

College of Visual & Performing Arts | Communication Studies

Kutztown University Honors Program Service Learning Trip to Mexico

Funding Source: Kutztown University Foundation

Amount Awarded: \$4,840

Overview: Four students from the Honors Program traveled to San Felipe del Progreso, Mexico. They resided for 10 days at the Mission Mazahua Hacienda. While on this trip the students participated in numerous projects that benefited the indigenous population of the Mazahua tribe.

continued

(Johanna Forte continued)

They worked with individuals with disabilities using equestrian therapy, built cisterns, assisted in preparing meals, planted gardens and helped with general upkeep around the hacienda. While on the trip the students also conducted independent research which will be further developed into their Capstone thesis for the Honors Program.

Christopher Habeck

College of Liberal Arts & Sciences | Biological Sciences



Field Margins as Historic Baselines of Biodiversity and Ecosystem Function in the Fertile Valleys of Pennsylvania: An Experimental Vehicle for Restoration Planning and Academic Program Cohesion

Funding Source: Pennsylvania State System of Higher Education
Amount Awarded: \$5,000

Overview: To calculate the biological, chemical and physical characteristics of wooded field margins and rank their potential utility as historical baselines and biological sources for future ecological restoration projects. Additionally, this project is an opportunity for faculty supporting the Environmental Science Program at Kutztown University to foster interdisciplinary collaborations and programmatic cohesion among faculty and students from four STEM fields of study.

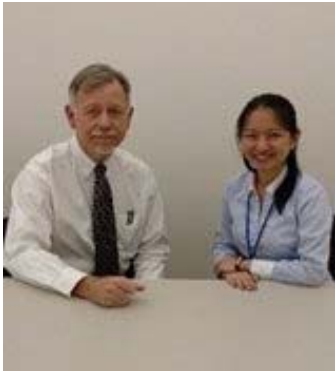
LEEF Gas Exchange and Fluorescence Package

Funding Source: LI-COR Environmental Education Fund
Amount Awarded: \$49,990

Overview: The equipment allows students and faculty to explore lab activities and research topics related to decomposition, carbon sequestration, soil and organismal respiration, and the impacts of environmental change on the carbon cycle. In addition, this equipment will provide students at Kutztown University with exposure to contemporary scientific equipment which will make them competitive in their pursuit of employment and admission to graduate school.

“Research is creating new knowledge.”

-Neil Armstrong



Edward Hanna

College of Liberal Arts & Sciences | Social Work

FangHsun Wei

College of Liberal Arts & Sciences | Social Work

An Exploratory Study of a Cognitive Emotional Methodology for Critical Thinking in Teaching and Curriculum Development

Funding Source: IDEA

Amount Awarded: \$7,791

Overview: This study intends to implement and formally evaluate a new/innovative methodology designed to teach students how to think critically for decision making in social work education and practice. The method that will be used in this study is Cognitive Emotional Methodology (CEM). This method consists of four levels of thinking: 1) What do I feel? 2) What do I believe? 3) What do I know? 4) What do I do? Over the past 3 years, the methodology has been introduced to students in seminars. The anecdotal responses have shown the methodology to have heuristic value. The methodology has also been positively received at regional and national conferences.



Dina Hayduk

College of Business | Sport Management & Leadership Studies

Stress Reduction Week for Faculty

Funding Source: Pennsylvania Faculty Health and Welfare Fund

Amount Awarded: \$1,500

Overview: An APSCUF Healthy Lifestyle Grant was awarded to Kutztown University to provide one month membership to the Kutztown University Recreation Center for 35 faculty members who entered a lottery. Normal rates for a one month membership for faculty is \$45.00. Faculty members could access the facility as well as all classes for the month of September. The Kutztown University Recreation Center extended the offer to all 42 faculty members who entered the lottery. They were offered one month to 6 weeks of membership and the opportunity to save 10% on a pro-rated membership for the rest of the semester; they would just have to attend the minimum of 10 times during the 6 weeks.



Dolores Hess

Division of Academic Affairs | Health & Wellness Services

Kutztown University Health Services

Funding Source: Maternal Family and Health Services, Inc.

Amount Awarded: \$80,424

Overview: This service helps students to take charge of their own sexual and reproductive health. It is available to all male and female students of the university. Some of the resources available to students include: STD screening and treatment; gynecological and pelvic exams; contraceptive methods and counseling; pregnancy tests; breast and cervical screenings; and counseling and referrals as indicated.



Loriann Irving

Division of Academic Affairs | Academic Enrichment

Student Support Services Program

Funding Source: U. S. Department of Education

Amount Awarded: \$301,115

Overview: Students with motivation and the potential to succeed in college are given support to help realize their academic, personal, and career goals. Eligible students must be first-generation or learning disabled and meet certain academic and economic criteria.

SSSP provides students with opportunities for academic development, assists them with college requirements, and motivates them toward the successful completion of their postsecondary education. The program provides academic tutoring, advice and assistance in postsecondary course selection, and assistance with information on obtaining financial aid, education to improve financial and economic literacy, and assistance in applying for admission to graduate and professional programs.

As a comprehensive academic support program, SSSP is dedicated to excellence and to the success of its diverse community of students. Through intrusive advisement, counseling, tutoring, learning communities, mentoring, support groups, and cultural activities, the program helps prepare its students “to meet lifelong intellectual, ethical, and career challenges.”



Jeremy Justeson

College of Visual & Performing Arts | Music

2016-2017 Presser Undergraduate Scholar Award

Funding Source: Presser Foundation

Amount Awarded: \$4,000

Overview: Kutztown University Department of Music announced music education major Sheridan Brodhead 2018 of Hellertown, Pa., as the second Presser Scholar at Kutztown University. Funded through a grant from The Presser Foundation, the Presser Scholar is awarded to an outstanding music student finishing his or her junior year and at least one-third of the student's credits over four years must be outside the field of music. Only institutions with recognized, high quality music programs are considered for Presser Undergraduate Scholar Award.



Yongjae Kim

College of Business | Sport Management & Leadership Studies

An Eye Movement Analysis of Sport Team Facebook Usability: A Comparison of Computer, Smart Phone, and Tablet as Presentation Modes

Funding Source: Pennsylvania State System of Higher Education

Amount Awarded: \$4,000

Overview: Despite the growing popularity of sport networking sites as a communication and marketing tool in the sport field, no empirical work has been sought to examine the processing and effectiveness of visual marketing stimuli on a sport team Facebook page. Accordingly, the purpose of this study is two-fold: 1) to identify and analyze patterns of visual attention of individuals on a sport team Facebook page; and 2) to examine if their visual attention has the same pattern across different media platforms. In an experiment, we will monitor and record users' eye movement and visual attention span during naturalistic exposure to a sport team Facebook page by using an eye tracker. The findings of this study will be used in an effort to improve visual marketing effectiveness and enrich sport consumer literature with a theoretical framework in visual information acquisition behaviors.

The Role of Fan Identification in Users' Attentional Patterns on Sport Team Facebook Pages: An Eye-Tracking Approach

Funding Source: North American Society of Sport Management

Amount Awarded: \$1,400

Overview: In the growth of expenditures on e-marketing through Facebook, the findings of memory research show that nearly 90% of what

continued

(Yongjae Kim continued)

people see in e-marketing is lost by the time it reaches the brains (Mayer, 2010). Accordingly, this study is designed to better understand sport fans' viewing behavior to expand the theoretical knowledge of visual marketing effectiveness and maximize the value of its Facebook page. The findings of this study will provide empirical evidence that the patterns of information acquisition behaviors vary across different media platforms. This would benefit sport researchers who are eager to unravel consumer media behaviors on new media. It is also anticipated that the findings will help sport organizations to create effective marketing or communication strategies.

Erin Kraal

College of Liberal Arts & Sciences | Physical Sciences

George Sirrakos

College of Education | Secondary Education

Student Produced Audio Narratives (SPAN)

Funding Source: National Science Foundation

Amount Awarded: \$171,790

Overview: The U.S. needs more diverse geoscientists for the workforce, but recruiting new geoscience majors is difficult. We propose a potentially effective curricular change in large, introductory courses for non-science majors introducing student-produced audio narrative assignments. Student-produced audio narratives (SPAN) are assignments in which students engage with geoscience content by telling a scientific story using simple audio recording and production techniques. The overall goal of SPAN is to change the learning environment so that students feel an increased personal connection to STEM, particularly in the geosciences. This project explores and implements the tool of student audio production, develops an implementation model through a partner faculty network, and measures the learning outcomes using mixed methods to research students' perception of and engagement in science. A collaborative regional network of faculty will design and implement student-produced audio narratives in their introductory-level classes, including at two-year community colleges. Finally, it researches the impact of student-produced audio narratives on students' perceptions of their learning environment and attitudes toward science using novel educational research methods.





Linda Lantaff

Division of Social Equity | Disability Services Office

Pilot Program for Students with Autism Disorders

Funding Source: Pennsylvania State System of Higher Education

Amount Awarded: \$7,500

Overview: The Disability Services Office, along with three sister universities, including West Chester, Indiana, and Edinboro, developed support programs and resources to increase the degree completion rate for college students with autism spectrum disorders. This grant supported a pilot of the My Place program during the 2016-17 school year. Five students participated in the fall semester and seven students were involved in the spring. The students partaking in the program received weekly support through one-on-one coaching/mentoring sessions, structured study sessions, and group activities and recreation.

Joann Monko

College of Liberal Arts & Sciences | Physical Sciences

Gear Up: Kutztown University Science Camp

Funding Source: U. S. Department of Education

Amount Awarded: \$960

Overview: The Kutztown University GEAR UP Program and Professor Joann Monko partnered to provide a one-day Science Camp for visiting 10th grade students from the Lancaster School District GEAR UP Program. Visiting students had the opportunity to work together on teams to complete challenging science experiments. For one activity, students did experiments to determine the best ratio of hydrogen and oxygen in order to propel a mini rocket the furthest. Visiting students also had the opportunity to visit Kutztown's STEAM Lab to explore the application of virtual reality with studying science.



Ernie Post

College of Business | Small Business Development Center

Small Business Administration Core SBDC Funding

Funding Source: U. S. Small Business Administration

Amount Awarded: \$382,343

Overview: The program focuses on activities to strengthen the small business community by providing consultation and educational services to entrepreneurs and small business owners through all phases of business development. Areas of assistance include: 1) assistance in international business, including referrals to other Small Business Development Centers, federal, state and local agencies; 2) activities to emphasize minority and women enterprise development; and 3) maintain working relationships with the local business and financial community, as well as economic development organizations, technical assistance providers and government agencies.

Procurement Technical Assistance Center

Funding Source: U. S. Department of Defense

Amount Awarded: \$70,000

Overview: Federal, state, and local governments purchase billions of dollars of goods and services every year. Federal purchasing offices are often required to set aside contracts or portions of contracts for exclusive bidding by small and/or minority-owned businesses. In addition, major prime contractors are required to subcontract part of their work out to small firms. The Procurement Technical Assistance Center (PTAC) helps businesses of all sizes market to the government – federal, state and local. Businesses interested in government contracting and needing assistance can talk to a PTAC counselor to learn how to explore the government arena for possible market opportunities.

State SBDC Core Funding

Funding Source: Pennsylvania Department of Community & Economic Development

Amount Awarded: \$345,903

Overview: The Kutztown University Small Business Development Center provides services to small businesses in Berks, Chester, Dauphin, Lancaster and Lebanon counties. The program focuses on activities to strengthen the small business community by providing consulting, educational and informational services to entrepreneurs and small business owners through all phases of business development.

continued



(Ernie Post continued)

Berks County Community Foundation-Neighborhood Assistance Program (BCCF-NAP)

Funding Source: Pennsylvania Department of Community & Economic Development

Amount Awarded: \$79,500

Overview: The Berks County Community Foundation (BCCF) and the Kutztown University SBDC will build upon the past four years of success with the Jump Start Diversity program by expanding the 8-week bilingual business skills for success program. This new series will market a new English version to the City of Reading African American nascent and early stage entrepreneurs as well as other underserved low to moderate income residents and those who are working in various life transition programs to assimilate back into the community.

Community Development Block Grant

Funding Source: U. S. Department of Housing and Urban Development

Amount Awarded: \$60,000

Overview: This program targets both established entrepreneurs within the Downtown Improvement District (DID) and nascent entrepreneurs residing within the city who are identified as having a high potential of being successful entrepreneurs and who meet the HUD low-to-moderate household income guidelines. Goals include: 1) Increase the capacity of existing entrepreneurs to expand in the downtown corridor; 2) Increase the number of eligible clients to start new businesses; 3) Increase the level of customer service and customer experiences; 4) Create a digital presence to attract customers; and 5) Increase awareness and participation in government contract opportunities.

SBA Growth Accelerator

Funding Source: U. S. Small Business Administration

Amount Awarded: \$46,000

Overview: Offer customized training to ten food manufacturing companies of the Greater Reading area to help them scale more efficiently. Ten minority and/or women owned companies will be selected with sales above \$50,000. Participants will receive training in innovation and creativity in the food industry, product development technology trends, packaging and labeling, package design, trade shows, nutrition, international trade, and wholesale distribution.

continued

(Ernie Post continued)

SBA Fast

Funding Source: U. S. Small Business Administration
Amount Awarded: \$4,000

Overview: The SBA-Fast funds are being used to support the consulting and professional development activity of the SBDC Tech Team members to provide services to clients who are in the process of commercializing or innovating technology.

The Workforce and Economic Development Network of Pennsylvania (WEDnetPA)

Funding Source: Pennsylvania Department of Community & Economic Development
Amount Awarded: \$313,227

Overview: WEDnetPA brings training funds to qualified companies across the Commonwealth through a network of community colleges, State System universities, and other educational institutions.

Christine Price

Division of Enrollment Management | Women's Center

Kutztown University: It's On Us

Funding Source: Pennsylvania Department of Education
Amount Awarded: \$29,100

Overview: Kutztown University is committed to improving the campus culture, increasing awareness around sexual assault and relationship violence, and reducing any barriers that negatively impact survivors and/or the reporting process. Two years ago, the campus aligned itself with the national It's On Us campaign and launched a media initiative through posters and a powerful video that spotlighted campus leaders speaking out about It's On Us. Funding will help to 1) improve awareness, prevention, reporting, and response systems regarding sexual violence in schools, colleges and universities to better serve all students; and 2) remove/reduce barriers that prevent survivors of sexual violence from reporting and/or accessing vital resources by creating a more consistent, empowering reporting process for student survivors of gender based violence.





Paul V. Quinn Sr.

College of Liberal Arts & Sciences | Physical Sciences

Justin L. Smoyer

College of Liberal Arts & Sciences | Physical Sciences

Mapping the Performance Characteristics of Solar Cells under Extreme Conditions for Applications in Near Earth Orbital Operations

Funding Source: Kutztown University Foundation

Amount Awarded: \$32,397

Overview: The use of solar cells has continued to increase at a nearly exponential rate since their early incorporation into the space program. At the close of 2016, the worldwide capacity of photo-voltaic, solar cells is estimated to have topped 303 gigawatts. Solar cells used in space-based applications subjects the cells to harsh environmental conditions which eventually degrades the cells performance and lifetime. This research project is a multi-thrust initiative designed to study, measure, simulate, and characterize the performance of photo-voltaic solar cells under extreme temperature conditions. These results coupled with theoretical modeling will help organizations such as NASA and device engineers better understand the impact of harsh environmental conditions on solar cell performance and allow more robust systems to be designed.



Christopher F. Sacchi

College of Liberal Arts & Sciences | Biological Sciences

LEEF Carbon Monitoring Package

Funding Source: LI-COR Environmental Education Fund

Amount Awarded: \$47,258

Overview: Seeks to provide access to research quality physiology equipment to faculty and students in biology and environmental sciences at primarily undergraduate institutions. Kutztown is especially committed to exposing students to sophisticated equipment they can encounter in their future studies or in their careers.



Christine Saidi

College of Liberal Arts & Sciences | History

Expression and Transformations of Gender, Family, and Status in Eastern Africa 500-1800 CE

Funding Source: National Endowment for the Humanities

Amount Awarded: \$53,037

Overview: Researchers will travel to Africa to collect oral traditions, oral histories, linguistic data and evidence from African archives. While in Africa, researchers will have the opportunity to interview over 35 elders, local religious and political leaders and university educators. Also, researchers will obtain gender-relevant vocabulary from Unga, N’gumbo, Ushi, and Bwile—all languages that have no dictionaries, and very few documents are written in these languages.



Richard Salafia

College of Visual & Performing Arts | Art Education & Crafts

Heather Fountain

College of Visual & Performing Arts | Art Education & Crafts

Creativity and Improvisation-79th Annual Art Education Conference

Funding Source: Kutztown University Foundation

Amount Awarded: \$1,000

Overview: The conference brought to life the creative possibilities and utility of narrative pedagogy in teaching and learning in the art classroom. It showed how narrative is a powerful form of discourse in the construction of knowledge and meaning in society. There were multiple layers of narrative discourse shown, including individual, cultural, and societal myths. These pluralistic stories are shaped and defined in the social space of the classroom. This unique conference brought together Bread and Puppet Theater, Cashore Marionettes, and artists Felice Amato and Megan Marlatt.

“Arts education aids students in skills in the workplace: flexibility, the ability to solve problems and communicate, the ability to learn new skills, to be creative and innovative, and to strive for excellence.”

-Joseph M. Calahan



Maria Sanelli

College of Liberal Arts & Sciences | History

Frederick Douglass Institute

Funding Source: Pennsylvania State System of Higher Education

Amount Awarded: \$25,163

Overview: Dr. Maria Sanelli assumed the leadership of the statewide program in spring 2017 and ran the Director's meeting at the Dixon Center. She also facilitated both the Debate Society competition and the Undergraduate Research Conference while also overseeing the Connections editorial staff. Furthermore, this grant helped to mentor the 14 Directors about maintaining and creating university programming. Seventy-five undergraduate students and twenty professors participated in the annual Debate competition and Undergraduate Research Conference.

Maria Sanelli

College of Liberal Arts & Sciences | History

Louis Rodriquez

College of Liberal Arts & Sciences | History

Frederick Douglass Institute Arc to Equality

Funding Source: U. S. Department of the Interior/National Park Service

Amount Awarded: \$42,000

Overview: During the 2016-2017 academic year, Kutztown faculty and students engaged in contextual thinking about our country's history and culture as it pertained to our national parks with three projects: 1) KU FDI Think Tank, 2) National Park Internships, and the 3) FDI Social Justice Teach-In. National parks were the catalyst for conversations about the nation's ongoing quest to fulfill the promise of equality and justice for all. Fifty-three undergraduate students, three graduate students, twenty-three high school students, ten high school instructors, and two professors collaborated with National Park personnel in this grant project. Kutztown University students travelled to New Jersey, Maryland, Colorado, Wyoming and South Dakota as part of their research.

Jerry Schearer

Division of Academic Affairs | Inclusion & Outreach

Next Steps AmeriCorps

Funding Source: AmeriCorps

Amount Awarded: \$5,278



Overview: The project recognizes, trains, and supports 70 low-income students from Philadelphia by engaging them in service, leadership, and mentoring. A majority of the service work by the KU Next Steps members was completed through the Community Outreach Center's after-school mentoring program with the Olivet Boys & Girls Club. Next Steps members averaged 10 hours per week of service and attended bi-weekly supervision/reflection sessions. A graduate student assisted the program administrator in working with the students to keep them encouraged and on track, as well as assist with the mentoring selection and training, and support the monthly workshops.

Keynote Speaker and Presenter at Annual Commission on Human Diversity Conference

Funding Source: Kutztown University Foundation

Amount Awarded: \$1,000



Overview: The theme of the 7th Annual Diversity Conference by the Commission on Human Diversity (CHD) was "Social Justice and Diversity: Sharing Perspectives & Envisioning the Future." Over 250 students, staff, faculty, and the public attended.

This conference sought to address various dimensions of multiculturalism, diversity, social justice, inclusion, and equity in all areas of life and education. Although this has traditionally been a "diversity" conference, in the past couple years the CHD has also seen the need to give voice to social justice issues, fighting for equity for all. Funding was specifically for the keynote speaker, Quanisha Green, Founder of *Black Women Rise*. In addition to the keynote, she also led a master workshop: "Be the Change: The Importance of Social Identity and Self-awareness to Social Change and Justice."

"What you do makes a difference, and you have to decide what kind of difference you want to make."

-Jane Goodall



Dylan Schwesinger

College of Liberal Arts & Sciences | Computer Science & Information Technology

A Low-Cost, Infrastructure-free Localization Solution for Flexible Warehouse Automation

Funding Source: National Science Foundation

Amount Awarded: \$17,735

Overview: The scope of this project was to develop technology for automated guided vehicles (AGVs) to autonomously navigate in warehouse environments. The key component of a navigation system is the ability to localize, that is, the ability to determine the vehicle's position with respect to some map. This project used light detection and ranging (LIDAR) based technology for the vehicle to sense its environment. Current approaches for AGV localization require landmarks to be placed into the warehouse that are easily detectable by LIDARs. The process is costly in both time and money as the warehouse needs to be surveyed and an optimal placement of landmarks must be chosen. The goal of this project was to utilize naturally occurring features in the warehouse environment to serve as landmarks instead of artificial landmarks.



Marilyn Stewart

College of Visual & Performing Arts | Art Education & Crafts

Elementary and Middle School Art Publications

Funding Source: Davis Publications

Amount Awarded: \$88,950

Overview: The grant provided time to revise student text, teacher editions, and all ancillary support materials for each grade. The revision includes the creation of a new section in each chapter focused on STEAM (Science, Technology, Engineering, Art, and Mathematics) in which students are introduced to STEM concepts and inquiry through the exploration of contemporary art and artists. Revision also involves added emphasis on the student as artist-researcher, the assessment of student learning, and increased opportunities for student choice. *Explorations in Art*, second edition, is scheduled for publication in spring of 2018.



Glenn Walters

College of Liberal Arts & Sciences | Criminal Justice

Jonathan Kremser

College of Liberal Arts & Sciences | Criminal Justice

Lindsey Runell

College of Liberal Arts & Sciences | Criminal Justice

Psychosocial Correlates of Bullying in Middle School Students: A Longitudinal Examination of Perpetrators and Victims

Funding Source: Kutztown University Foundation

Amount Awarded: \$2,000

Overview: The study will cover bullying as it relates to both victims and perpetrators. Measures of parental support, parental monitoring, proactive antisocial cognition, reactive antisocial cognition, peer deviance, depression, delinquency, and bullying. The study will be administered to sixth grade middle school students. Follow-up evaluations, involving re-administration of all measures will be conducted one (Grade 7) and two (Grade 8) years after the initial evaluation. Participants in this study will consist of students from J. T. Lambert Intermediate School (JTLIS) in East Stroudsburg, Pennsylvania. There will be two cohorts of students from JTLIS who will be asked to complete a questionnaire at three points in time (waves), with one year between waves. Data collection for this study began in November 2016 and should be complete by November 2019.



Carol Watson

College of Education | Elementary Education

Designing Instructional Materials for Cross Cultural Connect

Funding Source: Kutztown University Foundation

Amount Awarded: \$2,380

Overview: A nonprofit organization, created by Kayla Angstadt, a Kutztown University BS graduate and current MS student, wishes to provide students with authentic learning experiences in the areas of language, culture, and technology through a customizable, standards-based curriculum. Dr. Carol Watson contributed to her inspiration in the direction of making cultural connections. With the intent of furthering the vision and impact of this effort, six Kutztown University undergraduate Elementary Education students were recruited to write a curriculum for each grade level 1 through 6 to expand the ability of the program to serve a wider range of students.



Nancy Zimmerman

College of Liberal Arts & Sciences | Modern Language Studies

Pennsylvania State Modern Language Association Conference

Funding Source: Kutztown University Foundation

Amount Awarded: \$425

Overview: A group of Kutztown University Spanish and German BSED students attended the Pennsylvania State Modern Language Association Conference. Conference attendees, who were primarily modern language teachers, were very impressed by Kutztown University's teacher candidates. Kutztown University had more attendees than any other university at the conference.

Upward Bound



Funding Source: U. S. Department of Education

Amount Awarded: \$263,938

Overview: Upward Bound provides fundamental support to high school participants in their preparation for college entrance. Participants are low-income, first-generation college students or students who have a high risk for academic failure. The program provides opportunities for participants to succeed in their precollege performance and ultimately in their higher education pursuits. Kutztown University and Allentown School District are working together on Upward Bound.

Academic year activities will consist of after-school tutoring, supplemental instruction and skills development. Activities will include information on financial literacy, financial aid, career planning and exploration, attending college, standardized testing preparation, education on the college application process, college visits, and cultural awareness activities.

The summer program will have instruction in a variety of subjects and to better prepare students for standardized tests such as the SAT, ACT and Keystone. Students will receive additional information to assist with the college application process. For seniors who look to attend college, the program will offer services to address the tasks needed to get ready for college such as paperwork, navigating the college's web portal, housing issues, placement exams and financial issues – including financial and college literacy.

****The Upward Bound proposal was written by a team at Kutztown University; a Project Director will be hired in fall 2017.**

External Funding Facts and Figures

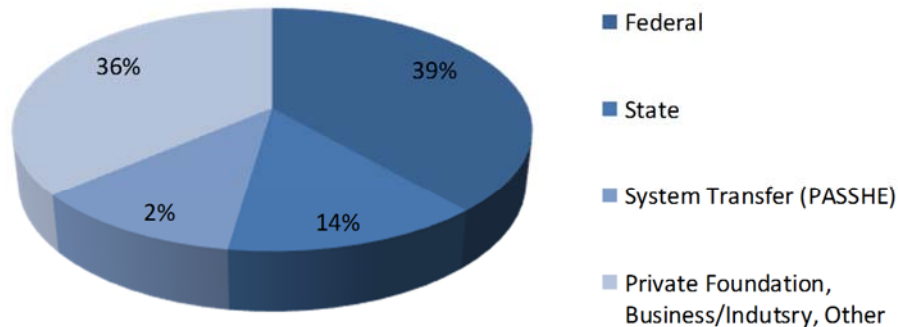
During Fiscal Year 2017, faculty and staff submitted 72 proposals (41% increase) to external sponsors requesting \$3,866,534 (62% increase) and received 44 awards (10% increase) totaling \$2,639,870 (27% increase). Nineteen proposals were pending at the end of the fiscal year.

The largest number of awards, 17 out of 44 awards, came from the Federal category. Awards in other categories included 16 Private Foundation, 6 State, and 5 System Transfer. The largest amount of funding came from Federal sponsors (55%), approximately \$1,454,338.

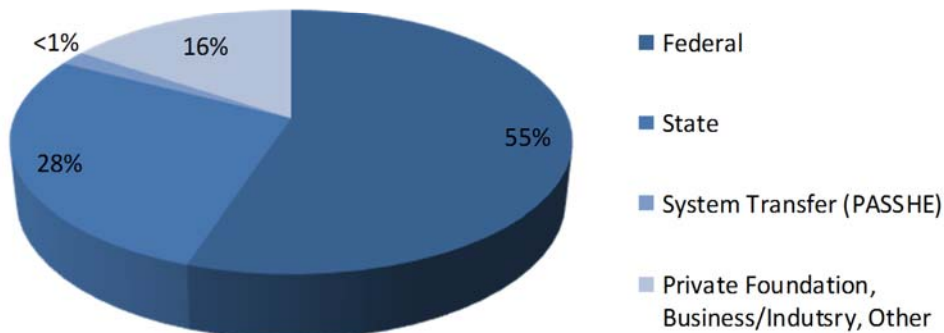
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017 ¹
Submissions	41	72	65	51	72
Awards	22	41	42	40	44
Total Requests	\$3,803,443	\$4,613,784	\$4,783,487	\$2,391,873	\$3,866,534
Total Awards	\$1,616,612	\$1,832,577	\$2,533,805	\$2,078,547	\$2,639,870

1. 19 proposals were pending at the end of fiscal year 2017.

**Percentage of Awards by Sponsor
(FY 2017)**



**Percentage of Funding by Sponsor
(FY 2017)**



Kutztown University Professional Development Committee Funding

The Professional Development Committee provides funding to promote scholarship. Funding is available for 1) travel assistance for professional and scholarly activities, 2) projects that enhance instruction, and 3) the purchase of items necessary to develop a novel approach and/or new direction for a course.

Recipients of Professional Development Committee Funding

NAME	DEPARTMENT
Aimee Adams	Counseling & Psychological Services
Mohammad Adeel	Philosophy
Roman Altshuler	Philosophy
Maria Asteriadou	Music
Allan Back	Philosophy
Tabetha Bernstein-Danis	Special Education
Angel Bestwick	Elementary Education
Anthony Bleach	English
Jennifer Bottinelli	Counseling & Psychological Services
Anne Brawand	Special Education
Kadee Brinser	Criminal Justice
Mario Cardozo	Geography
Kerri Cebula	Sport Management & Leadership Studies
Gary Chao	Business Administration
Leslie Chaundy	Social Work
Janice Chernekoff	English
Roberta Chevrette	Communications Studies
Angela Cirucci	Communications Studies
Colleen Clemens	English
Joanne Cohen	Counselor Education
John Conahan	Social Work
Moira Conway	Geography
Lisa Coulter	Counseling & Psychological Services
Emily Cripe	Communication Studies
Jason Crockett	Anthropology & Sociology
Halim Dalgin	Business Administration
Michael Davis	Geography
Michael Downing	English
Deborah Duenyas	Counselor Education
Lorri Engstrom	Sport Management & Leadership Studies
Muratcan Erkul	Business Administration
Robert Folk	English
Jennifer Forsyth	English

Kurt Frieauf	Physical Sciences
Albert Fu	Anthropology & Sociology
Michael Gambone	History
Ashwini Gangadharan	Business Administration
Janice Gasker	Social Work
Jennefer Gehringer	Elementary Education
Soo Goh	Music
Jerry Griffith	Geography
Christopher Habeck	Biological Sciences
Helen Hamlet	Counselor Education
Edward Hanna	Social Work
Gregory Hanson	Modern Language Studies
Daniel Haxall	Art & Art History
Dina Hayduk	Sport Management & Leadership Studies
Richard Heineman	Biological Sciences
Alexander Hernandez	Biological Sciences
Curtis Herr	English
Cheryl Hochberg	Art & Art History
Ko-Hsin Hsu	Criminal Justice
Tanzeer Hussain	Computer Science & Information Technology
Daniel Immel	Music
Jennifer Jacobson	Political Science & Public Administration
Joseph Jedwab	Philosophy
Jeremy Justeson	Music
Mauricia John	Anthropology & Sociology
Deryl Johnson	Communications Studies
Nicole Johnson	Special Education
Matthew Junker	Physical Sciences
Eun Yeon Kang	Business Administration
Kelley Kenney	Student Affairs in Higher Education
Tracey Keyes	Elementary Education
Mahfuzul Khondaker	Criminal Justice
Soojin Kim	Sport Management & Leadership Studies
Yongjae Kim	Sport Management & Leadership Studies
Yoon Mi Kim	Social Work
Erin Kraal	Physical Sciences
Jonathan Kramer	Business Administration
Jonathan Kremser	Criminal Justice
Brian Kronenthal	Mathematics
Rajeev Kumar	Business Administration
Frank Kumor	Music
Lynn Kutch	Modern Language Studies

Eric Landquist	Mathematics
Mathias Le Bosse	Geography
Perry Lee	Mathematics
Steve Lem	Political Science & Public Administration
Ann Lemon	Communication Design
Sandra Leonard	English
Yun Lu	Mathematics
Patricia Lutz	Elementary Education
Amy Lynch-Binieck	English
Sharon Lyter	Social Work
Mostafa Maksy	Business Administration
Carol Mapes	Biological Sciences
Jermaine Martinez	Communications Studies
Keith Massie	Communications Studies
Catherine McGeehan	Elementary Education
Matthew McKeague	Electronic Media
Padraig McLoughlin	Mathematics
Linda McMillan	Elementary Education
Thomas McNally	English
Claire McQuerry	English
Joshua Miller	Communication Design
Amanda Morris	English
Lauren Moss	Counselor Education
Feisal Murshed	Business Administration
Khori Newlander	Anthropology & Sociology
Carrie Nordlund	Art Education & Crafts
Mary Ann O'Neil	Elementary Education
Julie Palkendo	Physical Sciences
Rebekkah Palov	Fine Arts
Am Jung Park	Art Education & Crafts
Dale Parson	Computer Science & Information Technology
Sylvie Pascale Dewey	Modern Language Studies
Amy Pfeiler-Wunder	Art Education & Crafts
Carissa Pokorny-Golden	English
Robert Portada	Political Science & Public Administration
Alex Priou	Philosophy
William Prystauk	English
Patricia Pytleski	English
Yuxia Qian	Communication Studies
Phillip Reed	Physical Sciences
Christine Rhoads	Business Administration
Glenn Richardson	Political Science & Public Administration

Todd Rober	Music
Wendy Rodgers	Special Education
Angelo Rodriguez	Modern Language Studies
Carlos Rodriguez	Business Administration
Jesus Rodriguez	Modern Language Studies
John Ronan	English
James Rose	Art & Art History
Lindsey Runell Livingston	Criminal Justice
Christopher Sacchi	Biological Sciences
Christine Saidi	History
Carsen Sanders	Physical Sciences
Jennifer Schlegel	Anthropology & Sociology
Steven Schnell	Geography
Gregory Setliff	Biological Sciences
Jacob Sewell	Physical Sciences
Yasoda Sharma	Social Work
Jonathan Shaw	English
Laura Sherrod	Physical Sciences
Charlie Yong-Sang Shim	Computer Science & Information Technology
Kim Shively	Anthropology & Sociology
Georgeos Sirrakos	Secondary Education
Dawn Slack	Modern Language Studies
Judith Smith	Sport Management & Leadership Studies
Daniel Spiegel	Computer Science & Information Technology
Daniel Stafford	Rohrbach Library
Kathleen Stanfa	Special Education
Donna Steslow	Business Administration
Stephen Stoeffler	Social Work
Matthew Stone	Biological Sciences
Evan Summer	Art & Art History
Jennifer Suwak	Electronic Media
Juliana Svistova	Social Work
Terre Sychterz	Elementary Education
Joo Tan	Computer Science & Information Technology
Tashima Thomas	Fine Arts
Sarah Tindall	Physical Sciences
Chelsea Toth	Social Work
Scott Tracy	Counselor Education
Valerie Trollinger	Music
Raymond Tumbleson	English
Todd Underwood	Biological Sciences
John Vafeas	Social Work

Claire VanEns	Communication Studies
Patricia Walsh-Coates	Secondary Education
Patrick Walters	English
Carol Watson	Elementary Education
Christopher Weiler	Elementary Education
Mary Rita Weller	Social Work
John Howell White	Art Education & Crafts
Todd Williams	English
Mark Wolfmeyer	Secondary Education
Wing Hong Tony Wong	Mathematics
Gwendolyn Yoppolo	Art Education & Crafts
Ju Zhou	Mathematics
Nancy Zimmerman	Modern Language Studies
Maximiliano Zuniga	Modern Language Studies

Professional Development Committee Facts

The Professional Development Committee awarded approximately \$169,084 in funding to 182 applicants. The majority of the funding was used to support faculty travel to present scholarly work. Other funding was used to enhance instruction and support faculty purchases of materials to develop a novel approach and/or new direction for a course.

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Received	151	137	152	139	163	185
Awarded	143	128	146	137	159	182
Total Requested	\$ 104,454	\$ 99,848	\$ 128,552	\$ 113,372	\$ 145,939	\$ 171,426
Total Awarded¹	\$ 94,350	\$ 91,986	\$ 120,921	\$ 112,372	\$ 141,401	\$ 169,084
Annual Funding Available	\$ 94,482	\$ 120,482	\$ 120,482	\$ 120,482	\$ 120,482	\$ 150,482

1. Total Awarded may exceed Annual Funding Available due to the carryover of funds from prior years.





KUTZTOWN

U N I V E R S I T Y

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