

# Re:Search

Graduate Studies & Research at Salisbury University  
2013 Edition



Into the Wild:  
DISCOVERING THE ANSWERS THAT ANIMALS HOLD

Salisbury  
UNIVERSITY



"There is less to say" by Jinchul Kim. Read about Kim's work on page 13.

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Salisbury University is a proud member of the University System of Maryland.



“We are proud to be a recognized leader that is helping our state provide the highly trained people and resources needed ...”

Welcome to the 2013 edition of *Re:Search*. I am excited to present the third issue of Salisbury University’s magazine devoted to the research and scholarly activities of our faculty, staff and students. With each issue, we continue to showcase the impact that research and scholarship has on our ability to provide a distinct and holistic education to our students.



This issue demonstrates the depth and breadth of the commitment our faculty have to their disciplines. For example, by venturing into the wild, our Biological Sciences Department faculty have been able to bring current, real-world examples back into the classroom, which has supplemented their teaching of basic ecological theory. This combination of theory and practice has proven to be an extremely powerful and effective teaching model; we hope to continue expanding opportunities like these across the disciplines moving forward.

Once again, we take great pride in sharing our success in building an exceptional STEM program at Salisbury University. In her Q&A section, Dr. Karen Olmstead, dean of the Henson School of Science and Technology, shares compelling answers and insights into our ability to build strong STEM majors. Dean Olmstead also highlights our ongoing efforts in providing a University-wide support system aimed at bolstering SU’s role in this critically important area.

Salisbury University continues to show its support for the surrounding community, and all of Maryland, through our stewardship of a long-term Title IV-E grant that is dedicated to training social workers across the state, particularly in the area of child welfare. We are proud to be a recognized leader that is helping our state provide the highly trained people and resources needed to increase vital social services for our fellow citizens, especially in rural areas.

I am deeply proud of the continued recognition that our faculty receive internationally. Salisbury University has a nationally recognized history of excellence within the Fulbright program. In this edition, we are excited to highlight a handful of the faculty who received Fulbright awards over the past few years. It is a privilege to share how their efforts abroad have renewed their passion for their discipline once they return to our classrooms.

As you can see, our faculty, staff and students continue to expand the reach of our University both nationally and beyond. Salisbury University is on the forefront of discovering answers to real-world problems and training the future civic and technological leaders of tomorrow. We are a campus that is on the move as our reputation as *A Maryland University of National Distinction* continues to grow. It is my hope that you will enjoy the following pages and consider becoming more involved in supporting our research efforts.

A handwritten signature in black ink that reads "Janet Dudley-Eshbach". The signature is written in a cursive, flowing style.

Janet Dudley-Eshbach, Ph.D.  
President  
Salisbury University

*“... from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.”*  
— Charles Darwin (1809 - 1882), *The Origin of Species*

# Into the Wild:

## DISCOVERING THE ANSWERS THAT ANIMALS HOLD

*A complex mixture of mating sounds in the jungles of Panama calls out to SU researchers offering them a link to understanding human speech and communication. The sandy shores of Assateague Island, with its population of wild horses, help researchers understand information impacting our agricultural pasturelands on the mainland. A fish population found in the frigid waters of Iceland begs for scientific study, as researchers search for answers on adaptability to temperature change. And the billfish found in the blue coastal waters of the mid-Atlantic host parasites for examination, ultimately leading researchers to knowledge about the ecology and evolutionary biology of this game fish and the host-parasite relationship.*

*Four distinguished members of SU's Biological Sciences Department and their students have gone beyond the classroom "Into the Wild" to study animals and discover the unique answers that only the animals can give us.*

### Frog Communications Signaling: Providing Insight into Speech Comprehension

*Ryan C. Taylor, Ph.D., Associate Professor, Biological Sciences*

Male túngara frogs, found from Mexico to northern South America, emit a series of whines and chucks as part of their mating behavior. This phenomenon is being studied by Dr. Ryan Taylor. Recipient of the SU 2013 Outstanding Research Mentor Award, Taylor conducts fieldwork with his students at the Smithsonian Tropical Research Institute in Panama and recently published a study in the journal *Science*, the most prestigious general science journal in the world.

"Frogs have evolved to use acoustic signals (vocalizations) as their primary mode of communication for courtship," explained Taylor. "Males stake out small territories and vocalize; females listen to these males and then select a mate. Females have strong preferences for certain types of vocalizations (e.g., lower pitch or calls with additional notes). Males who do not make attractive vocalizations fail to mate, and hence fail to pass their genes and traits into the next generation. On any given night, there are far more males at the pond than females, generating intense competition among males for mates. Female mate choice then determines which males pass their genes into the next generation. Thus, female choice is an important force that

drives the evolutionary change of male courtship signals."

This breeding behavior involves males who congregate at a pond and begin calling. Taylor continued to explain: "On a typical night, the many calling males at the pond produce a cacophony of overlapping calls. Analogous to the human listener at a noisy cocktail party, female frogs must segregate individual vocalizations and correctly assign them to their source. In addition to the vocalization, male frogs also inflate an elastic sac in their throat when they vocalize. One strategy that female frogs employ is to watch for the movement of this inflating vocal sac. Like the human lip reader, doing this improves their ability to segregate the calls of individual males, thereby allowing them to select among the potential mates."



Taylor testing the robotic frog system

## ENGAGED FACULTY



Robotic túngara frog

Taylor's team designed and fabricated a robotic túngara frog that is extremely effective in accurately imitating a live male frog. "The timing of inflation of the robotic frog's vocal sac can be set to match the call (as occurs in nature) or can be altered to inflate asynchronously with the call. This allows us to conduct experiments to assess how female frogs integrate both audio and visual components into their mate choice decisions. Doing these experiments has given us a profound insight into the process that drives the diversity of courtship signals in the natural world," said Taylor. This study on the túngara frog's mating communication, with its array of vocalizations and visual cues within a noisy environment, will help the researchers grasp an understanding of how humans listen and process the complicated system of audio and visual components which comprise human speech.

SU students are instrumental in the research being done on this program. Nine students have traveled to Panama with Taylor since 2007. There he has taught them frog-collection procedures and how to perform the behavioral experiments, both activities occurring throughout the night. The students are exposed to many aspects of science, which develop their professional skills in biology, physics, electronics and experimental design. They are also crucial in helping Taylor collect data, allowing the information gathering to be done much more quickly with their assistance.

Humans, along with most animals, use several different modes to communicate. Human communication involves the audio component of speech in addition to visual signals such as body posture, gestures and facial expressions. This multimodal system

of speech and signals expedites communication through a process that would not be possible if only one signal was used. "Multimodal communication is widespread in the animal kingdom. There are relatively few species, however, where the role of individual signal components can be neatly dissected to provide an understanding of how individual as well as combined signal components influence communication. Like frogs, humans integrate audio and visual information (lip reading) during speech comprehension. Our study has the potential not only to help us understand signal evolution in nature, but may also provide insights into human speech comprehension in noisy environments," said Taylor.

The National Science Foundation has funded the research with two grants amounting to approximately \$1.5 million. The findings of this research also have been spread widely through a book on animal communication in addition to publication in both scientific and news journals. The robotic frog system was spotlighted in the *Wall Street Journal*. The BBC is documenting Taylor's work in Panama with a film showing the utilization of robotics and how they are instrumental in helping researchers understand evolution and behavior. The broadcast of this film will give those who are not scientists a chance to acquire a broader knowledge of the discipline. It also will increase recognition of the excellent science being performed at SU.

"The research questions that I am addressing with the robotic túngara frog system were originally conceived by me. However, it is important to note that this research program has truly been a collaborative effort with contributions from a number of other talented researchers," said Taylor. The collaborators include Dr. Michael Ryan (University of Texas at Austin), Dr. Barrett Klein (University of Wisconsin, LaCrosse), Joey Stein of Moey Inc. (New York, NY), Dr. Rachel Page



Kyle Wilhite, Ryan Taylor and Kelsey Mitchell in Panama

*"Our study has the potential not only to help us understand signal evolution in nature, but may also provide insights into human speech comprehension in noisy environments."*

— Dr. Ryan Taylor

(Smithsonian Tropical Research Institute, Republic of Panama), Paul Clements (Salisbury University) and Dr. Kim Hunter (Salisbury University). Michael Ryan and Rachel Page are co-principal investigators on the currently funded National Science Foundation grant. Barrett Klein designed and fabricated the robotic frog bodies. Joey Stein and Paul Clements designed and fabricated the mechanical system for the inflation of the robotic frog vocal sac, and Kim Hunter was a collaborator on experimental design.



## Dung Beetles: The Farmer's Friend

*Dana L. Price, Ph.D., Associate Professor,  
Biological Sciences*

Dung beetles are essential to agricultural ecosystems because of their important role in recycling animal waste. Dr. Dana Price is currently developing a biodiversity inventory of Maryland Scarab beetles (Superfamily *Scarabaeoidea*). Much of her recent research has focused on dung beetles, which she has studied for over 12 years. Dung beetles are Scarabs so they fit perfectly into her research goal: to create a taxonomic guide to the *Scarabaeoidea* of Maryland.

"Research in Maryland dealing with Scarabs has been limited to a species checklist provided in 1984. No one has conducted a bioinventory of these important species in Maryland, nor has anyone provided keys to the species for identification. This research will provide the first taxonomic guide for *Scarabaeoidea* in Maryland and the Mid-Atlantic region and valuable taxonomic keys that anyone will be able to use for the identification of these species as well as natural history data and locality data," explained Price.



*"SU students, both undergraduate and graduate, are the driving force for my research. I would not be able to do it without them."*

— Dr. Dana Price  
(left, with graduate student Mallory Hagadorn)

Undergraduate student Simone Nemes is preparing the "Illustrated Keys to the Dung Beetles (*Scarabaeinae*) of Maryland." "Working in Dr. Price's lab gave me the invaluable experience of working on a project that was both well-suited to my needs as a student and exciting to me on a personal level. I was able to deepen my understanding of ecology through practical experiences. Dr. Price worked tirelessly to make doing research in her lab an awesome experience," said Nemes.

"*Scarabaeoidea* of Maryland's Eastern Shore" is the scholarly undertaking of undergraduate Jennifer Shaughney. "Dr. Price was always engaging and enthusiastic as a mentor. I feel very lucky to have had the opportunity to do field research with someone so knowledgeable. Working in her lab not only helped me discover my interest in entomology, but also gave me invaluable experience attending conferences and accomplishing my own research project as an undergraduate," noted Shaughney.

Mallory Hagadorn is an M.S. student in the applied biology program who is working with Joseph Renstein and Kaitlyn Mitchell, both of whom are supported on a Guerrieri Undergraduate Summer Research Grant. This summer, they are studying beef and dairy cattle farms across Maryland to examine dung beetle diversity and abundance on organic and conventionally managed cattle pastures. Hagadorn was awarded a National Science Foundation Graduate Research Fellowship to complete this work (see page 32). She will be studying the gut organisms (endosymbionts) of *Onthophagus taurus* dung beetles across Maryland. "Dr. Price is an exceptional mentor, whose excitement for her research has fueled her students' desire to learn. She is extremely dedicated to her students and has worked side-by-side with us in the field and lab. Thus far, my time spent in the Price

lab has enabled me to grow as a person, develop as a biologist and discover an area of science that I love," said Hagadorn.

These research projects support Price's long-term goal of creating a taxonomic guide to the *Scarabaeoidea* of Maryland that will ultimately be beneficial for anyone wanting to conduct Scarab research in Maryland and the surrounding states.

"The dung beetle research has allowed us to meet local farmers from Maryland. This will help us to provide outreach and to create a fact sheet that will provide information to farm managers about how to increase dung beetle populations on their farms and to improve pasture management. We are making local connections and meeting people who care about improving their pasture ecosystems," explained Price.



Scarabs have been reported as both economically and ecologically important insects in natural and agricultural ecosystems. The feeding habits of May and June beetles, along with Japanese beetles, have a negative impact on a variety of crops and ornamentals. *Scarabaeinae* dung beetles, on the other hand, are beneficial in that their feeding and nesting behaviors help recycle nutrients back into the soil and reduce runoff and the abundance of dung-breeding nematodes and flies. Dung beetles also are among the most cost-effective of all animal taxa for assessing and monitoring biodiversity, and consequently they are considered a model organism for understanding broad biodiversity trends.

"SU students, both undergraduate and graduate, are the driving force for my research. I would not be able to do it without them," said Price. Some recent examples of projects include the following.

The study "Dung Beetles of Wicomico and Worcester County Maryland" was published with two undergraduate research students.

"Species Diversity and Succession of Dung Beetles to Horse Dung on Assateague Island" was a research initiative of graduate student Elizabeth Rentz. Rentz studied the dung beetle species diversity and abundance on the island in comparison to that of the mainland. The diet of the horses on the island consists mainly of salt marsh grass, which has a different salt content than the diet of mainland horses. Rentz's study found that most dung beetle species are not attracted to the island horse deposits, suggesting a potential problem with dung build-up on Assateague.



## Adaptability of Arctic Charr to Temperature Change: If They Don't Use It, Will They Lose It?

*E. Eugene Williams, Ph.D., Professor,  
Biological Sciences Department*

"Are fish that have been isolated and living at a single temperature for thousands of years still able to adapt and do the things that other fish can do when exposed to a new temperature? If so, are they able to adapt as well as their cousins who experience temperature change all the time?" asks Dr. E. Eugene Williams, winner of the SU Outstanding Research Mentor Award in 2005 and the recipient of a University System of Maryland Board of Regents Excellence in Mentoring Award in 2006. Williams received an SU research mini-grant in addition to a Fulbright Scholarship to research these questions by studying Icelandic Arctic charr. Along with his primary research on the effects of temperature change, he is working in collaboration with two scientists from Hólar University College in northern Iceland on a total of three studies involving Arctic charr.

"What makes Iceland unique is that the Arctic charr there have become separated into distinct populations that no longer interact with one another. Biologically, the populations are able to interbreed with one another but do not do so because they are physically separated. They live in ponds,

streams and lakes in different parts of the island. The result is that they don't interbreed, but they all remain members of the same species. So Iceland gives us the opportunity to look at fish that are all very closely related, and that have experienced different environmental conditions for thousands of years," explained Williams.

Why are these fish of such great interest? As the glaciers thawed during the last Ice Age about 12,000 years ago, the charr were trapped in different locations within Iceland. Some of these locations have temperatures that change all the time. Water temperature goes up and down – in the daytime it gets warmer; nighttime it gets colder; summertime it gets warmer; wintertime it gets colder. As a result, the charr that live in those particular locations feel temperature change daily. On the other hand, there are locations in Iceland where the same species of fish have been living at a constant temperature because they swim in spring-fed water from the glacier runoff. These fish have been residing at a constant temperature of 5°C since the last Ice Age. They have never seen 6°C; they have never seen 4°C. If you take a typical fish such as the charr (which is related to salmon and trout) and move them from one temperature to another, they do a whole set of things biochemically and physiologically to make up for that temperature change. So the questions remain: Are the fish that have been stranded for thousands of years still able to do those things? How will they handle the change and which groups are most vulnerable?

SU students were introduced to the fish of Iceland during on-site class study from 2009-2011 through Hólar University College. The Fulbright Scholarship for the temperature adaptability study allowed Williams to collect charr samples in Iceland from August through December 2012. SU students are now involved on the SU campus in performing lab experiments on



Student researchers in Iceland



the charr tissue samples and beginning to analyze the data.

The second study is being done in collaboration with Helgi Thorarensen, a fish physiologist and professor of aquaculture at Hólar University College. It is a study on the nutritional status of stock fish. There is a huge aquaculture of charr in Iceland, whereby researchers can investigate metabolic capacities and temperatures on these farm-raised fish, searching for answers on questions such as optimal growth rates and harvest times. SU students are currently looking at the metabolic enzyme activities and gene expression rates of these charr while performing their lab experiments.

The third study is on speciation, the evolutionary process by which new biological species arise. It is being conducted in collaboration with Bjarni Kristjánsson, an ecologist and associate professor at Hólar University College. SU students are not yet involved in analyzing data as the study is still in its infancy. It involves a group of charr that got trapped

during the last Ice Age in Lake Thingvallavatn, the largest lake in Iceland. These charr have evolved to fill in all the possible niches in the lake since they are the only vertebrates that live in the lake's complex environment. The charr are all the same species, but they are evolving so that some feed on plankton, some feed on other fish and some live on the bottom. There are four different lifestyles, almost like different species, but they are all the same species. They do not interbreed with each other (although they could) because they have physiological and behavioral barriers that keep them from doing so such as different mating dances, sexual maturity rates and timing of reproductive cycles. They are evolving into different body shapes and one can see the differences just by glancing at them.

"This is a rare opportunity for scientists to watch a species evolve from a common ancestor," noted Williams.

### Monogenean Parasites in Billfish: Presenting a Clearer Picture of the Host-Parasite Relationship

*Ann M. Barse, Ph.D., Associate Professor, Biological Sciences*

A group of parasitic flatworms pose a potentially disease-producing threat to several billfish species. Dr. Ann Barse received an SU research mini-grant to study monogenean parasites. The work includes documentation and study of these prevalent parasites on three sought-after billfish species in Maryland waters: white marlin, blue marlin and roundscale spearfish.

Barse studies parasites of estuarine and marine fishes, and a few invertebrates as well, from an ecological and evolutionary perspective. The group of parasites focused on in this study is the Subfamily Capsalinae, Class Monogenea and Phylum Platyhelminthes, more commonly known as flatworms. These parasites inhabit the surfaces of skin, fins, gills, mouth and nasal passages on large fishes living in the open ocean, potentially damaging their host if large numbers build up on the fish.

Billfishes are one such charismatic group of oceanic game fishes. It includes 10 extant



*"Are fish that have been isolated and living at a single temperature for thousands of years still able to adapt and do the things that other fish can do when exposed to a new temperature?"*

— Dr. E. Eugene Williams

*"A benefit gained from this research is the clarification and correction of the literature on these parasites . . . This work will resolve these inaccuracies in the literature so there is a clearer picture of billfish host-parasite relationships."*

— Dr. Ann Barse



species worldwide: broadbill swordfish, sailfish, blue marlin, black marlin, white marlin, striped marlin and four species of spearfish. Sport fishing has aided biological study of these species. There has been a recreational fishery for billfish off the Maryland coast in the Mid-Atlantic Bight dating back to pre-WWII days. The sport began after the formation of the Ocean City inlet in the aftermath of the 1933 Chesapeake-Potomac hurricane, which allowed passage of fishing boats to the productive offshore fishing grounds. White marlin and blue marlin are the primary billfish species for which Maryland anglers fish. In 2007, anglers and scientists recognized that some of the white marlin were actually roundscale spearfish. Today, boats travel 50 to 100 miles from the Ocean City inlet in search of these three billfish species in a catch-and-release fishery.

One exception to the routine of releasing billfish back to swim another day is during the White Marlin Open. August 2013 marks the 40th year of this five-day fishing tournament where hundreds of boats compete for prize money, mostly targeting offshore marlins and tunas. A small fraction of the fishes caught are brought to the weigh dock and are accessible to scientists for biological investigations. Barse and her students examine all external surfaces of these fish for monogeneans, and all specimens found are heat-killed and then placed in fixative in a vial. Vials are labeled so that it is known which individual fish the parasite came from

## ENGAGED FACULTY

as well as its exact infection site (its "microhabitat") on the fish. By the end of a typical tournament, they will have collected hundreds of monogeneans with information on the host preferences and microhabitat information for every worm. Barse and a student also have attempted to collect capsalines from swordfish off the Florida coast where recreational anglers can catch them less than 10 miles off the coast. Although swordfish do occur off the Maryland coast, there is virtually no sport fishery for them in Maryland.

Many SU students have been instrumental in the research, assisting over the years in the examination of fish hosts and in collecting parasites at the dock. Outside of collecting specimens, students have assisted in investigating all records of billfish-monogenean associations reported in the literature. This is a tedious task due to the numerous changes in the taxonomic names of both hosts and parasites over the last century, as well as numerous errors in reporting on host and parasite identification. Every record must be evaluated for accuracy. Students also have assisted in the lab in staining parasite specimens and in the preparation of museum-quality permanent slides.

While on sabbatical in fall 2011 at Auburn University, Barse and colleague Ash Bullard re-described a capsaline species using state-of-the-art microscopes, including one with Differential Interference Contrast (DIC) optics. With financial donations from the Henson School of Science and Technology, the Biological Sciences Department, Maryland Sea Grant, the Ocean City Light Tackle Club, the International Light Tackle Tournament Association, the SU Foundation, Inc. and the generosity of private individuals interested in the research, Barse was able to obtain a DIC microscope with accessories and software for imaging, drawing and measuring parasite specimens.



Barse is excited that in the future, students will also be able to participate in this most important aspect of her investigative work on parasites.

*"A benefit gained from this research is the clarification and correction of the literature on these parasites. Currently, the literature is full of errors, with much of it published in the late 1800s and early 1900s. There are inaccuracies in depicting parasite morphology (e.g., labeling major nerve cords as intestine, omitting details of the reproductive system) and in correctly recording parasite-host species associations and geographic localities. This work will resolve these inaccuracies in the literature so there is a clearer picture of billfish host-parasite relationships,"* noted Barse.

The ultimate goal of the research is to evaluate the use of monogeneans as a tool for learning about the ecology and evolutionary biology of billfish. In addition, Barse is focusing her attention on conducting thorough investigations of the identification, naming and classification of the parasites, along with study on their development and evolution. ❖



# Pub Night @ the Library

By Beatriz Hardy, Ph.D.,  
Dean of Libraries and Instructional Resources

On February 22, 2013, several hundred people gathered at Blackwell Library to celebrate the achievements of Salisbury University's faculty and staff. Pub Night @ the Library, jointly sponsored by Blackwell Library and the Office of Graduate Studies and Research (GSR), originated five years ago as a formal reception. The event evolved last year into the more casual, festive and popular Pub Night, with the Library's Current Periodicals Section transformed into a British-style pub for the occasion.

SU faculty members earn wide recognition for their outstanding teaching, winning numerous state and even national awards. What is less well known is their excellent record of scholarship and service. At last year's Pub Night, GSR and the Library joined to honor faculty and staff who had published scholarly materials in the previous year as well as those who had won grants of \$500,000 or more during



Honorees (from left) Drs. Molly Parsons, Carol Wood (for Deborah Matthews) and Kathleen Scott with Dean of Graduate Studies and Research Clifton Griffin

their SU careers. This year, we additionally acknowledged faculty and staff who received outside honors or recognition and those who volunteer with professional or other non-profit organizations at the state, national or international level.

Three people – Deborah Matthews of the Social Work Department, Molly Parsons of the Nursing Department and Kathleen Scott of the SU Counseling Center – passed the milestone of \$500,000 in grants this year, joining last year's 21 honorees. Clifton Griffin, the dean of Graduate Studies and Research, and Diane Allen, provost and senior vice president of academic affairs, presented the three with certificates and, appropriately for Pub Night, gift cards from SoBo's Wine Beerstro.

Pub Night honors the wide range of accomplishments of SU faculty and staff. Scholarly publications ran the gamut from textbooks and monographs to countless scholarly articles. Honors included Fulbright Scholarships and fellowships at Brown, Stanford, and European and Asian universities to awards from professional organizations and state councils. Service encompassed everything from editorial

boards for international journals to committees of professional organizations and state advisory councils and commissions. These awards and activities reflect three of SU's core values: excellence, community and civic engagement.

The Library staff is pleased to join GSR in honoring our faculty and staff. We take great pride in what they have accomplished, because in some small way their accomplishments are ours. What we do in the Library – selecting and providing access to resources, finding the esoteric articles that researchers sometimes need, supporting classroom instruction, making faculty aware of what we have – helps the faculty and staff of SU to achieve the very accomplishments we honor at Pub Night. And, of course, we also take great pride in the Library staff members who were honored for their service and publications.

Beyond pride in our collective accomplishments, the Library staff is also pleased to participate in Pub Night because it is just plain fun. As librarian Stephen Ford observed, "Pub Night provided a pleasant, relaxing social atmosphere to chat with other faculty and to reconnect with those we see way too seldom in our busy work life."

Who knew Current Periodicals could be such fun? ❖



## AROUND THE GLOBE

# Promoting Mutual Understanding: SU's Fulbright Scholars Legacy

*It all started with a nudge. When Dr. Tom Erskine, English Department, returned in 1989 from his first Fulbright experience in Jordan, he nudged his colleagues to follow in his footsteps. Many of them did, and they went on to keep those nudges of Fulbright inspiration going with other faculty. Then in 2010, The Chronicle of Higher Education acknowledged that those nudges had transformed into something special when they named SU among that year's top producers of Fulbright Scholars in the United States. Salisbury was the only master's-level institution in Maryland to earn the distinction. To gain a glimpse into this highly acclaimed academic opportunity, a few of SU's recent Fulbright Scholars share reflections on their unique experiences abroad.*

### A Less-Than-Innocent Abroad

*By Gary Harrington, Ph.D., Professor,  
English Department*

Many have said that being on a Fulbright is a once-in-a-lifetime opportunity; I feel incredibly fortunate to have had it be for me a thrice-in-a-lifetime experience. I was in Poland as a Fulbright Distinguished Chair in 2002, then again as a Distinguished Chair

for 2010-2011, and yet again on a renewed Fulbright Chair appointment for 2011-2012. It may well have seemed to my colleagues at University of Marie Curie-Sklodowska in Lublin that I simply refused to go away.

When applying for the 2010 appointment, I very briefly considered applying for a Fulbright elsewhere, and then in a moment of clarity I asked myself "Why?" I couldn't come up with any compelling answer because my 2002 Fulbright stay in Poland was terrific in every respect. My 2010-2012 appointments proved to be every bit as productive and rewarding.

Being in Poland on a Fulbright provided me with the opportunity to exchange ideas with those whom I likely wouldn't have encountered otherwise – I'm referring not only to Polish professors, but also to fellow Fulbrighters and to Polish students. I feel as though my understanding of the material in my field has been substantially enhanced through my having become acquainted with "outsider" perspectives on American culture, and my Fulbright experience helped me to grow not only as an educator but as a person. The incredible warmth and generosity of the Polish people were inspiring, and I now have a first-hand

understanding of the difficulties encountered and the enormous rewards accrued by someone living as a "stranger in a strange land" for an extended period.

For my Fulbright appointment, I taught American literature to senior-level undergraduates and to graduate students, all of whom were fluent in English. One day, though, I had a graduate student begin to speak Polish in response to one of my questions. She was a bit embarrassed, but I told the students that responding in their native tongue wasn't a bad strategy in my class. First of all, since I don't speak Polish, I could hardly disagree with whatever anyone said in that language; secondly, I'd be obligated to remark to any student who responded in Polish, since it would quite literally be true, that "I never thought of the matter in quite that way before."

In class, I was deeply gratified to discover the students' genuine interest in American literature. I've returned to the U.S. with an enhanced sense of the importance of teaching American studies since I saw so clearly during my Fulbright appointments that an interest in American culture is most emphatically not confined only to those within the borders of the U.S. I hope that I contributed in some small way to the Polish understanding of America in all its infinite and invigorating complexity.

### Establishing Historical Context

*By James King, Ph.D., Assistant Professor,  
English Department*

I was a Fulbright fellow during the spring semester of 2010 and worked as a senior lecturer within the English Department at the University of Ghana at Legon. I taught a graduate course on the early literature of W.E.B. Du Bois. My experience with my graduate students was enlightening in that I discovered that the Ghanaian students had only a little knowledge of American history, pertaining to our involvement in the Atlantic slave trade, and the conditions, rhetoric and policies that undergirded this terrible aspect of our national history.





In order to allow Du Bois' texts to resonate and impact the students in the manner I felt they should, I found it necessary to revise my planned classroom activities during the early weeks in our term to include a significant amount of lecture related to this historical context. To the credit of these master's-level students, once that contextual/historical information had been received, they tackled the texts and then began to present formidable abilities for synthesis of the information received, as well as innovative skills of analysis regarding the ways that Du Bois' work reflected the influence of his early trip to Africa and research on the continent in the early part of the 20th century.

While in Ghana, I recorded interviews with individuals who had worked within the administration of Ghana's first president, Kwame Nkrumah. I interviewed one of the persons responsible for creating Ghana's first television broadcast company, GTV, as well as the founder of the University of Ghana at Legon's Institute for African Studies, ethnomusicologist Kwabena Nketia. These interviews will be used to create a text discussing the early years of Ghana's developing national culture and infrastructure. In February 2010, I was invited to give the opening lecture for the centennial celebration of Kwame Nkrumah. The lecture was broadcast nationally on radio and discussed as part of national news broadcasts the following day. In addition, my experience has contributed to research re-casting Du Boisian Double Consciousness for the 21st century.

Continuing the SU-Ghana connection, two Fulton School students are traveling to Ghana in the fall to pursue coursework at Legon as part of a new student exchange program. In addition, I am the lead writer on a Fulbright-Hays grant proposal that would

locate SU faculty and educators from within the Wicomico County school system in Ghana as participants in an educational program that will provide them instruction on Ghanaian culture, language and life-ways from Ghanaian instructors, and the opportunity to visit sites of cultural and historical significance; experiences and instruction they can return with to Salisbury to facilitate the development of new curriculum informed by their experiences.

### Making History Vivid and Inspiring

*By Dean Kotlowski, Ph.D., Professor,  
History Department*

My sponsors were the friendly and enormously generous staff at the Philippine-American Educational Foundation, and my hosts were the splendid staff and faculty at De La Salle University (DLSU) in Manila. The students I taught at DLSU were memorably outstanding, as young scholars and as human beings.

In fall 2008, I taught "The United States in the 1970s" to 16 enthusiastic students. They absorbed the material, the policies of the presidents of the decade, the fads and trends, and the popular culture as well as the lectures and books that brought this information to light. I also covered topics that I would not be able to teach to American students, such as the relationship

between Richard Nixon and Philippine President Ferdinand Marcos, the latter mostly unfamiliar to Americans in their late teens and early 20s. At our last class session, the students presented me with a wooden calendar with "Philippines" emblazoned on it. As I accepted the present, one blurted out: "Sir, are you going to miss us?" I answered resoundingly: "Yes!"

While in Manila, I researched archival materials relating to the life of Paul V. McNutt, U.S. high commissioner to the Commonwealth of the Philippines (1937-39 and 1945-46) and U.S. ambassador to the Republic of the Philippines (1946-47), for a biography that will be published in 2014 by Indiana University Press. The collections I examined in the Philippines added a valuable international perspective. For example, a photograph of McNutt and Philippine President Manuel L. Quezon seated together, laughing, underscored their easy relationship. Upon McNutt's death in 1955, Philippine President Ramon Magsaysay hailed him as the "architect" of the "close" ties between the United States and its former colony. Although a later generation of historians, in both countries, would rightly be critical of McNutt's handiwork and see the U.S. bases, parity rights and preferential trade in the Philippines as examples of America's exercise in "neo-imperialism," my research shows that it was not always seen that way.

My time in the Philippines has led me to be more conscious of Asia in my teaching of world and U.S. history. I regularly use images and anecdotes from the Philippines in my courses, especially when I discuss Western imperialism and World War II in the Pacific. The "Pacific War" had a devastating impact on Asia in general and the Philippines in particular. Living in the Philippines also has encouraged me to visit other countries, in Europe as well as Asia, and to bring those experiences to our students and thus make history, and also international travel, accessible and inspiring to them.



Members of Dean Kotlowski's "The United States in the 1970s" class, De La Salle University, Manila, December 2008





## The Importance of Being in the Field

By Brian Polkinghorn, Ph.D., Professor,  
Conflict Analysis and Dispute Resolution Department;  
SU Center for Conflict Resolution Executive Director

I had the pleasure of working in an international program at Tel Aviv University where I had 36 graduate students from 22 countries. Many were already deep into their careers or at least had some notable professional experience (United Nations peacekeeper, several who were assistants to prime ministers, former ambassadors, etc.). The average number of languages spoken by this cohort was four, and about half already possessed a graduate degree.

The faculty were among the best in the field of conflict resolution and enjoyed personal reputations for their harrowing exploits. My small faculty group had two Oslo Peace Accord negotiators, a military negotiator, a former ambassador, and the mediator who extracted the Palestinian gunman out of the Church of the Nativity in Bethlehem and subsequently defused a situation that could have led to war.

My experience reinforced two important points about teaching conflict resolution. First, we must constantly engage in practice and be in the field improving our art in order to make teaching and research more meaningful. Second, in places such as Israel and the West Bank, the most instructive means of teaching is to make use of current on-the-ground case studies.

While in Israel, the incredible level of safety and security came as a pleasant surprise. Granted, it takes a little getting used to seeing the first and last parent on the elementary school field trip bus carrying a rifle and the young people in the military toting automatic weapons (as you see in the picture at the Western "Wailing" Wall [above]). While it is common to see people with automatic weapons everywhere, it is also extremely unlikely to experience physical violence.

Since 2010, I have gone back often to work with Israeli researchers on several well-conceived multi-disciplinary research projects. These post-Fulbright experiences have helped me in modifying my own



research designs, proposals and tools. It also has provided several new approaches as to how U.S. researchers can fundamentally recast our beginning assumptions and subsequent methods of framing social conflict. I also have brought resources and welcomed people into the SU classroom who speak from direct experience.

The Fulbright experience opened a thousand and one doors for me. I am now hard wired into several Israeli and Palestinian conflict resolution networks. As an American within these networks, I have been invited to work on cross-border cooperative efforts between Palestine, Israel and Jordan. I now, routinely, lead private meetings between Palestinian, Jordanian and Israeli delegations in neutral locations such as Oxford on sensitive cross-border cooperative efforts. This continuing experience has helped me in the classroom and in several boardrooms.

## Making Deliberate Choices for Teaching

By Ed Robeck, Ph.D., Professor,  
Teacher Education Department

In Malaysia, there is a saying that translates roughly as, "we follow the customs of the place where we are." To do this, however, requires that one be near people who are willing to share their culture and customs openly. While engaging in a Fulbright fellowship in Malaysia, I found myself surrounded by such people who shared their customs and, much more, their friendship.

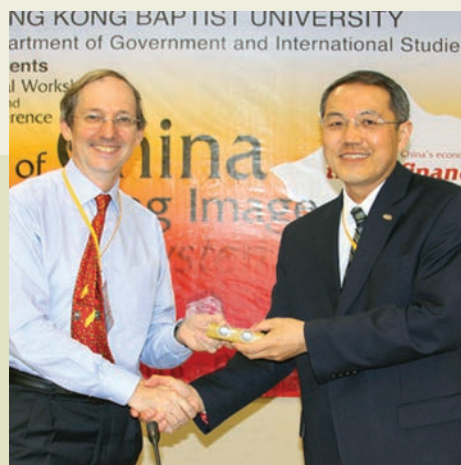
The customs of Malaysia include those of the Bumiputra – native Malaysian culture – but also a mix of cultures from India, China, Indonesia and elsewhere, working together to balance that diversity through mutual respect. When the Olympic torch was carried past the building where my

family had an apartment in Kuala Lumpur, people from all of those cultures came out to share the festivities. As easy as it is to take for granted the cultural patterns that are part of daily life, one benefit of traveling to another country is that it provides a contrast against which one can more readily recognize those customs that surround us in our own society.

While in Malaysia, I worked with teachers in schools to explore how instructional technology can be used effectively to teach science. In those schools and classrooms, there was an emphasis not only on teaching children the formal curricula, but also on inspiring them regarding the power of learning and creative thinking. This led me to wonder about the role that motivation and creativity are given in U.S. schools. I saw that Malaysian teachers trust students to do things like maintain the classrooms through such simple acts as sweeping the floor and wiping down desks, which made me question the extent to which teachers in the U.S. could put the same faith in students.

Importantly, too, I saw the physical spaces of schools arranged to deliberately encourage the sharing of ideas among teachers, which made me think about the extent to which collaboration is encouraged in the work of teachers in U.S. schools. These experiences reminded me that education, in terms of both the formal curriculum and informal expectations embedded in educational practices, depends on choices. They are choices based on what is considered important for children to learn and how the work of teachers is valued.





In many ways, the questions I found myself asking while on my Fulbright fellowship in Malaysia continue to be central to my work at SU. As a teacher-educator, I work to help my students, as well as teachers in area schools, recognize the ways that teaching can be undertaken deliberately, based on a set of conscientious choices. With those students and teachers I continue to explore ways to shape the customs of schooling so that they put into practice those ideas that are most valued.

### **Bridging Nations 'Too Big to Fail'**

*By Ying Wu, Ph.D., Professor,  
Economics and Finance Department*

As part of the Fulbright U.S. Scholar program, my duty was to teach and conduct research at China's University of International Business and Economics in Beijing. I also traveled to a number of Chinese universities to give lectures on such topics as "Monetary Policy Effectiveness in the Post-Bubble Era" and "China's Monetary-cum-Exchange Rate Policy." I was a panel speaker and theme group facilitator at two international student conferences organized by Hong Kong's U.S.-China Center: the China and America in the Next Century Conference, and the Rise of China and Its Changing Image in the Global System Conference. I also attended a U.S.-China Fulbright Conference organized by U.S. Consulate General Shenyang.

The Fulbright experience is a journey of learning. Students of different nationalities frankly present themselves while carefully listening to each other. This is great, exciting and incredibly remarkable, as American students and Chinese students are engaging in a candid, civil and face-to-face dialogue that builds a bridge between the young generations of two great nations. It is such experiences that convince me that the U.S.-China relation is not only "too big to fail" but also a hopefully win-win prospect to each.

Chinese students are fascinated about group work and class presentations. They are so open and willing to try new ways of learning. I had a remarkable experience

working with a group of Chinese and American students at a conference. My theme group had eight students from Germany, Pakistan, Columbia, the U.S. and China, and each student's perspective helped shape our group presentation. Everyone was so engaged that our group discussion went beyond the stipulated time and the conference coordinator had to "wake us up" to attend the next scheduled program!

My time in China not only enhanced my classroom teaching but also provided a great deal of insights and first-hand observation that have both broadened and enriched my understanding of the contemporary Chinese economy. My recently completed article "China's Monetary-cum-Exchange Rate Nexus Under Financial Repression: Theory and Evidence" is truly a fruit of my Fulbright experience. In addition, based on my conference panelist speeches, I wrote an article that is to be published by Peking University Press. These research works have been presented at both Salisbury University and University of Maryland College Park; some of them are further carried on to an expanded book project with faculty of China Foreign Affairs University, which is partly funded by China's State Administration of Foreign Experts Affairs, and I am the principal investigator of the research project participated by several faculty members of China Foreign Affairs University.

While the Fulbright takes a year of professional leave, what it brings back to SU is far beyond what a year can measure. Being a Fulbrighter allows me to experience personally what bridging nations means and promises. ❖



### **SU FULBRIGHT SCHOLARS**

- **Thomas Erskine** – English: Jordan 1989-90, Thailand, Romania 2000-01
- **Edna Quinn** – Nursing: Thailand
- **Connie Richards** – English: Spain 1995
- **James Welsh** – English: Romania 1993-94, 1998-99
- **Gary Harrington** – English: Poland 2002-03, 2010-12
- **Andrew Sharma** - Communication Arts: India 2006-2007
- **Michael Waters** – English: Romania 2006-07
- **E. Patrick McDermott** - Management and Marketing and Legal Studies: China 2007-08
- **Edward Robeck** - Teacher Education: Malaysia 2007-2008
- **Tylor Claggett** - Economics and Finance: China 2008-09
- **Dean Kotlowski** – History: Philippines 2008-09
- **Shekar Shetty** - Economics and Finance: Estonia 2008-09
- **Brian Polkinghorn** - Conflict Analysis and Dispute Resolution: Israel 2009-10
- **James King** – English: Ghana 2009-10
- **Ying Wu** – Economics and Finance: China 2010-11
- **Eugene Williams** – Biological Sciences: Iceland 2012-13
- **Richard Hoffman** – Management and Marketing: Estonia 2012-13

*If you know of a faculty member who was a Fulbright Scholar while at SU and omitted from this list, please let the Graduate Studies and Research Office know.*

# Painting a Brighter Picture of Research Across the Liberal Arts

By Tina M. Melczarek, Philosophy Department Program Management Specialist

Whether it's creating a series of paintings, studying the stress effects of the H1N1 pandemic on a population or exploring a lesser-known Brontë sister, SU's Fulton School of Liberal Arts faculty are actively pursuing their research, bringing it to their current courses and involving SU students in research, mentoring them toward excellence in school and beyond.

Much of this is made possible by the Fulton curriculum reform passed in 2008, which changed faculty work load from teaching up to four classes a semester to teaching only three greatly enhanced classes each semester, thus freeing up more time for exploring this type of scholarly work, which results can then be brought back into the classroom. Students take four, four-credit courses instead of five, three-credit courses. The rationale is that it enables students to delve more deeply into the content, not with increased classroom time, but by doing more work and engaging in more project-based experiences outside the classroom. This has led to an increase in the number of undergraduate research projects and faculty mentoring activities within the school. Every major within the Fulton School had to be re-designed to accommodate the four-credit course load. Faculty began engaging and mentoring their students in research projects as a way to add depth and enrichment instead of simply increasing classroom time or giving students more assignments.

## Jinchul Kim: Establishing a Gallery of Success

Jinchul Kim, associate professor in the Art Department, uses paint to explore and express his ideas and worldview in his creative works. His style of contemporary realism with figurative work is shown at five galleries worldwide and at many shows during the year. He says that teaching informs his art and vice versa.

"As artists, we must have a creative body of work. I need to be a successful and professional artist before I stand in front of students. I also try to be a good role model. To be a successful and professional artist means you have to support yourself with your own art, have gallery representation, sell and move your work, and exhibit your work nationally and internationally," Kim said.

He models this for his students by running his own self-supporting 3,000 square-foot studio, where he takes in student interns each summer. There the students learn everything from the basics of canvas preparation to eventually graduating to painting the first layer of Kim's paintings if they show enough skill. The Fulton curriculum reform has helped him with his painting schedule. Before the reform, he could paint only in winter and summer, since the spring and fall semesters were filled with teaching.

Kim also inspires and mentors his students by finding ways for them to show their work outside of the classroom.

"Students sometimes do solo exhibitions. In the Guerrieri University Center there's the Art Space, which is a 20-foot-long wall. One of our students, Leah Lewman, has shown there twice. It's more work for me to curate this space, but it's so important for the students to have their work be seen," Kim said.

One of his students, Jee Hwang, who graduated in 2006, has gone on to garner representation in a New York City art gallery, which is the pinnacle of success for many artists.

"I share their stories with my art, and I share my art with them. It's full circle," said Kim.





### **Karl Maier: Seeking to Solve Global Issues and Study their Stressors**

In the Psychology Department, Dr. Karl Maier, associate professor, has expanded his stress-based health psychology research program to encompass more global issues, including pandemics and climate change. He and his students, whom he considers junior collaborators, run both basic and applied stress research out of the department's Behavioral Medicine Laboratory. His students are integral to designing and building their projects, collecting data, and reporting the findings at student and professional conferences.

"They learn from me and I learn from them," Maier shared.

One of his studies was funded by an SU mini grant and a Fulton Faculty Grant. "Those types of grants are critical to pursuing this type of research. It's difficult to get external funding for relatively small projects when they are about studying basic research questions," Maier explained.

Not only does Maier mentor students in the classroom, but he also works with his current and former students to publish empirical articles in peer-reviewed journals on findings based on their collaborative efforts in the lab.

"In the lab, we have just finished data collection from one experimental study looking at perceptions of climate change. Do the messages that people receive change their perception of climate change? At what point do people feel prompted to action? Or do they feel as though all's well if they're told climate change is only affecting part of the globe?" Maier pondered. In addition to his lab work, students will be grappling with these basic research questions and more in a special topics course he'll be co-teaching in fall 2013, Psychology and Global Climate Change.

This mentoring also leads beyond the walls of SU for Maier's students.

"By mentoring them, I can help them put together a competitive application for graduate school," he insisted, stating that many students go on to pursue master's or doctoral programs in psychology, and some have even gone on to pharmacy and medical schools. "This broad mix reflects the interdisciplinary nature of what we do in the lab."

And that interdisciplinary nature is what Fulton School Dean Maarten Pereboom encourages.

"One of our goals as an institution of higher education is to ensure that all SU graduates leave here with the tools to conduct meaningful research and become innovators in their chosen fields," said Dr. Pereboom. "One of our strengths as a University is in our ability to integrate research across academic disciplines and schools. Fulton faculty members have sought numerous ways to enshrine research within the liberal arts curricula," he added.

### **Judith Pike: Celebrating the Lesser-Known Brontë Sister Unearths Vacuum in Critical Area**

Sometimes studies show not what is present, but what is missing. When Dr. Judith Pike, associate professor in the English Department, was researching the Brontë sisters, she realized that there was a wealth of research yet to be done about Anne Brontë. Of the three, Anne is the lesser-known Brontë, Pike explained.

"Surprisingly, her [Anne's] derelict brother who died from an overdose is more celebrated and has more of a presence than she does, even though she published two books," Pike said.

She translates this research into a seminar for her students, who in turn learn how to critically read scholarly articles and add to the continuing discussion.

"We had to learn how to read critical scholarly articles in graduate school, but it was more of a 'sink or swim' mentality," Pike said. "What they don't understand is that one article is often in response to another article."

Recently, 10 of Pike's students were accepted to the National Conference on Undergraduate Research (NCUR).

"I had a student who went against the foremost scholar on author Jane Addams and found some textual evidence that went against what the criticism was saying. It was brilliant," Pike said.

In summer 2013, Pike traveled to England to present at the Research Society in Victorian Periodicals. She says this level of scholarship has been made possible by the change in her curriculum load.

"There was no time to do research during the year," Pike said, regarding the pre-curriculum reform teaching schedule.

Pike's work will appear as a chapter in the *The Blackwell Companion to the Brontës* (forthcoming in 2015).



*Faculty extending themselves and their research are a firm benefit of the change from multiple three-credit hour classes to the enhanced curriculum. "Our reformed curriculum enables our finest scholar-teachers to be sustainably active in their disciplines while inspiring their students to take up those disciplines actively and successfully," said Pereboom.*

*By adding to their respective bodies of research work, Fulton faculty continue to expect excellence in the classroom. SU students reap the rewards by learning from engaged scholars and creative minds, then expand that into the world beyond the walls of Salisbury University. ♦*



## After the Storm: Students Take the Lead in Sandy Damage Assessment

By Arthur Lembo, Ph.D.

Associate Professor, Geography and Geosciences Department  
And SU's Eastern Shore Regional GIS Cooperative Technical Director

of New York, New Jersey and Connecticut. They labeled damage to homes and buildings on grids using a four-level classification provided by the Federal Emergency Management Agency (FEMA). They also compared photographs to determine how high water levels rose.

Their data was immediately shared with ImageCat, Inc., an international risk- and disaster-management company contracted by New Light Technologies, Inc. of Washington, D.C., to support FEMA's effort. ImageCat compiles the data with other teams' to help provide the federal government with an overall damage assessment. This damage assessment was used by FEMA to determine areas that required immediate assistance and also to provide a rapid estimate for potential recovery costs.

### SU GIS Students Are Respected as Professionals Within Their Discipline

SU students were the largest contingent to assist ImageCat and the company paid students for their time. We used to seek out these kinds of opportunities to give our students real-world experience. Now, in the last few years, the reputation of our students has grown so much that organizations seek us out.

#### Before



#### After



Superstorm Sandy was the second most destructive hurricane in United States history – striking the eastern seaboard in late October 2012 – causing an estimated \$70 billion in damages. In the wake of Sandy's devastation, agencies from around the country engaged in relief and recovery efforts. Efforts by first responders were critical to provide life-saving activities for those immediately affected by the storm: rescuing people stranded in their homes and giving medical attention to those injured during the storm. Secondary responders worked tirelessly to bring the areas back to a more civilized state by restoring utility services, securing damaged structures, and providing food, water and shelter.

As these efforts were underway, I coordinated a team of some 50 Salisbury University geography students, training in GIS and map interpretation, who assisted with storm damage assessments. Working around the clock in Henson Science Hall on the weekend following the storm, the team, led by four graduate students, examined before-and-after Google Earth aerial images





SU students successfully engaged in similar damage assessment work when an earthquake struck Haiti in 2010, and SU's track record of being able to provide dozens of capable geographers for image interpretation and GIS-related skills positioned SU's students for consideration for the Sandy activities. Having worked in the professional sector for many years, I understand the efforts required to assemble a team on short notice. It is very difficult for any organization to respond at a moment's notice, drop everything and coordinate an effective strategy to get the work done. Doing this within the context of an undergraduate institution is even more formidable. Nonetheless, SU's geography students demonstrated the professional competency to complete the work and the professional ethics to balance their workloads.

### SU Students Understood the Importance of the Challenge and Made No Excuses

According to Dr. Brent Skeeter, Geography and Geosciences Department chair, Sandy struck at a particularly busy time in the semester. "Corresponding with the recovery efforts performed by our students, our GIS group was called away to Baltimore for important statewide meetings, while the rest of our department was hosting the Pennsylvania Geographic Society (PGS) Conference on campus," he shared.

In addition, late October was a time that many students were having to complete mid-term assignments. Many of the students gave morning presentations at the PGS Conference and then dashed back to



the lab to complete the recovery efforts throughout the evening. "Without the diligence and professionalism of our students, this work could not have been completed," Skeeter added.

With many of the faculty tied up in Baltimore and the PGS meeting, managing the work activities became the responsibility of the resident graduate students in the department's M.S. in GIS Management Program. These students quickly found themselves no longer talking about managing a large GIS activity in a classroom setting, but they now were actually implementing a large-scale project at a moment's notice. Alexander Nohe, one of four GIS management grad students spearheading the project, said he appreciated being able to apply technical and managerial skills he learned at SU.

"Large organizations can work in unison on disasters," said Nohe. "The damage did not look that bad here, but seeing aerial views [of states further north] really opened my eyes to what happened. This project is definitely a resume builder; it shows employers that I can be useful in working in a stressful environment with minimal information."

The other student managers were Chapman Cole, Eric Flint and John O'Brien.

"This is a great chance to manage a diverse group of people," O'Brien said. "You always learn from projects like this, especially when you can get your hands on real data and work under a deadline."

Cole added: "It's a good feeling to know we are helping further educate FEMA on the damage so they can provide necessary assistance to those affected as soon as possible." Flint noted the importance of collaboration between organizations in order to effectively collect, compile and analyze data.

Like most natural disasters, Sandy came 'out of the blue.' Having done this sort of work for 25 years, I was impressed to see how rapidly this group of young GIS students rose to the occasion and completed the work effort. Our graduate



students showed that they could quickly assemble a data-collection and oversight team, and our undergraduates performed as well as any other team I have worked with in this sort of situation.

"This project is a wonderful opportunity for SU students and faculty to aid fellow citizens who were hit by Superstorm Sandy," said Dr. Karen Olmstead, dean of SU's Henson School of Science and Technology. "By providing much-needed technological and analytical support, they are helping others and gaining practical experience. I am so pleased with the Eastern Shore Regional GIS Cooperative and geography program's real-time assistance with the impacts of the storm."

The project ran the risk of not even getting off the ground. "While the technical challenges of mobilizing so many people in a short time are formidable, we'd be kidding ourselves if we didn't recognize the administrative tasks necessary to complete a project of this scope," said Michael Scott, director of the Eastern Shore Regional GIS Cooperative (ESRGC).

Lauren McDermott, the program manager for the ESRGC and an SU alumna, ensured that all the contractual paperwork was in place so that the work could begin. The task of preparing the paperwork for 50 students was tackled by Jennifer Stevens, the program management specialist in the Geography and Geosciences Department. "It would be impossible to get the students contracts in place within two days, and our students showed great professional maturity by beginning the work assignment even before their contracts were signed," said McDermott.

Scott, an expert in the field of disaster response, added: "in most response situations, professionals often have to realize that the work comes first and then trust that other issues like getting paid will eventually get worked out. We are so proud of the professionalism shown by our students and applaud the great work by our administrative staff to ensure that this work was able to begin in a timely manner." ❖

# Protecting Vulnerable Children: The Title IV-E Education for Public Child Welfare Program

By Terry Cardillo, in an interview with Jennifer Wright, LCSW-C, Social Work Department Director of Field Education

The three primary goals of public child welfare are the safety, permanence and well-being of children. The Title IV-E Education for Public Child Welfare Program is designed specifically to meet these goals by recruiting and training competent social workers to enter the field of public child welfare.

Federal Title IV-E child welfare funds support an educational partnership between the University of Maryland School of Social Work and the Maryland Department of Human Resources. Within this partnership, Title IV-E specialized training is offered at Salisbury University, the University of Maryland Baltimore County and Morgan State University. The challenging program at Salisbury University is open to Master of Social Work (M.S.W.) students.

SU has played a major role in bringing the Title IV-E education program to all areas throughout the State of Maryland, especially to the rural areas, by starting four satellite locations. Technology is used to provide distance education in addition to on-site instruction beyond the main campus. Approximately one third of SU program field students are training at satellite locations in Hagerstown, Elkton and the Higher Education Center at Chesapeake College in Wye Mills. The fourth site will open fall 2013 in California, MD, in Saint Mary's County.

This continued outreach into the rural areas will have a significant positive impact. Throughout Maryland, local Departments of Social Services need highly qualified and well-trained social workers to protect vulnerable children. Public child welfare is the largest service area within these county departments, and Title IV-E education is focused on this need.

"Prior to Salisbury University offering the Master of Social Work, the Eastern Shore did not have enough supervisors in public child welfare," said Jennifer Wright, LCSW-C, SU's director of field education for the Social Work Department. "The advanced training and field experience required were not easily accessible there, and candidates were required to travel to the Western Shore. The satellite locations



*"My supervisor and administration at the Talbot County Department of Social Services helped me understand that getting my M.S.W. would be a 'good thing.' Not only was my agency able to support me through the process, but DHR's Title IV-E program helped me financially. If it were not for the financial help, I would have most likely not been able to finish the M.S.W. program. Thanks to the Title IV-E program, I have been able to obtain my M.S.W., sit for and pass both the LGSW and LCSW-C, and I am now a supervisor – encouraging others to pursue their advanced degree!"*

— Jennifer DuBosq, LCSW-C  
Child Protective Services Supervisor,  
Talbot County Department of Social Services

fulfill a great need for the delivery of public child welfare services."

The Title IV-E program is unique in several ways. Students receive a financial stipend of between \$8,000 and \$9,500 per school year to help pay for tuition and fees. Upon graduation, they are guaranteed a job with the Maryland Department of Human Resources. This is a contractual agreement to work in public child welfare. For every academic year of participation in the program, there is an employment obligation of 12 months. Students who withdraw from

the program or choose not to fulfill the employment obligation must repay their stipend.

The program is very competitive, and the number of stipends is limited to available funding. Training includes field placement in a local Department of Social Services. Students attend six child welfare seminars per year in addition to the required field seminars that all M.S.W. candidates attend, and a specialized Child Welfare elective is required. Title IV-E students also are provided competency test training and take the competency exam as part of their IV-E training at SU, giving them the advantage of entering their job with that higher skill level.

"Title IV-E is an excellent stepping stone into the public child welfare arena and career advancement," Wright commented. "To be a supervisor at a local Department of Social Services in the state child welfare system, one must have two years post-M.S.W. experience and pass an advanced licensing exam along with the competency test."

Title IV-E social workers serve to protect children by performing many functions. They work with Child Protective Services on abuse and neglect investigations. They provide in-home services to children and their parents by helping them solve difficulties such as navigating the school system, linking parents to addiction and mental health services, and helping parents advocate for their children and become better role models. These workers also provide out-of-home services by recruiting and training foster parents, monitoring children placed in foster care or homes for adoption, and reporting to the court system.

The field of public child welfare is certainly challenging, but the work can be extremely rewarding. "Research on the Title IV-E program has shown that graduates are more satisfied with their job, as they have had the proper training and know what to expect, and because of this job retention is higher," Wright explained. The result is a win-win situation for both the graduates and the children and families they serve. ❖

# STAND4YOU: Raising Awareness and Promoting Treatment

By Kathleen Scott, Ph.D., Counseling Center Director & Anisa Diab, NCC, LGPC, STAND4YOU Program Coordinator

Thanks to a three-year, \$302,883 grant from the U.S. Department of Health and Human Services' Substance Abuse and Mental Health Services Administration, SU's Counseling Center and a cross-discipline team of faculty and staff have developed STAND4YOU. This suicide-prevention program's goals include using awareness campaigns, discussion groups, e-trainings and outreach consultations to foster early detection of mental health issues and change student behavior by increasing their openness to seeking help.

Suicide is the second leading cause of death in college-age students, and an increased number of students are coming to campus with more complex and severe problems than in the past.

SU students are not immune to mental health problems. Of concern are students whose behavior is disruptive or alarming, students who stop going to class or completing their homework because they are too depressed to get out of bed or lack motivation, students whose thought processes are distorted or obsessive, and students who have had to take time off from school due to family tragedies and circumstances that demand their attention and alter their mood and priorities, among other problems. The need for adequate mental health services has never been so clear.

The good news is that treatment can help improve mood and functioning, and that counseling helps students remain in school and perform better. SU's Counseling Center launched the STAND4YOU suicide prevention and mental health promotion program in January 2013, and there are a number of program components being implemented to help our students.

One component is Kognito at-Risk, an online interactive simulation training that uses avatars and realistic scenarios to teach participants how to recognize problems in students, intervene effectively with those students and make referrals to appropriate resources. The training has been shown to

be effective in its goals and is listed as a best practice with the Suicide Prevention Resource Center and the American Foundation for Suicide Prevention.

To date, 52 faculty, 156 staff and 463 students have completed the training, including almost all Student Affairs Office staff and student leaders such as resident assistants, orientation leaders, SGA board members, supplemental instruction leaders, peer educators and student mentors, among others. For the majority of faculty and staff who completed the training, this was their first time receiving any kind of suicide prevention training. For students, 92 percent (N= 313) indicated that they would recommend the training to a friend/peer. Anecdotally, those who completed the training reported that they enjoyed the interactive nature of the training, felt that the scenarios were relevant and applicable to their professional and personal life, and thought that the information and training were useful.

First-year and transfer students are being asked to complete the training prior to their arrival on campus in the fall. To complete the training, faculty and staff can go to [www.kognitocampus.com/faculty](http://www.kognitocampus.com/faculty) and students can go to [www.kognitocampus.com/student](http://www.kognitocampus.com/student) and use Enrollment Key: Salisbury51.

Another component of the program is Let's Talk, a drop-in consultation service for students in satellite locations around campus modeled after a program developed at Cornell University. Let's Talk allows students to receive feedback about multiple topics of concern, ask questions about counseling and engage in less formal contact with Counseling Center staff to assist with reducing the stigma to seeking counseling. If appropriate, Let's Talk counselors recommend that students participate in counseling; otherwise, the consultation itself is the assistance provided. No appointments are needed and services are free.

The STAND4YOU program also sponsored awareness events such as the program kick-off in February and "Step it Up!" held in May, as well as student trainings related to suicide prevention and



mental health promotion. Awareness events slated for the fall include World Suicide Prevention Day on September 10 and Depression Awareness Month in October. There also will be an "Out of the Darkness Walk" for suicide awareness and prevention taking place on September 28 on the boardwalk in Ocean City. These events provide an opportunity to engage and educate students about suicide and mental health issues.

STAND4YOU has built partnerships both on and off campus and is working to further expand these collaborative efforts. A STAND4YOU student team also has been created, and any student or organization is welcome to join. The purpose of these teams is to identify needs and plan events and programs that will effectively reach students and contribute to a campus that is proactive in addressing the mental health issues of students.

If you would like to become involved with STAND4YOU or have questions, visit: [www.salisbury.edu/counseling/STAND4YOU](http://www.salisbury.edu/counseling/STAND4YOU) ❖

## Connecting the Business Community with the University: The Maryland Small Business and Technology Development Center

By Terry Cardillino, in an interview with John N. Hickman, Eastern Region Director, Maryland Small Business and Technology Development Center

Both budding entrepreneurs and established business professionals share a similar need. They must make the right decisions for their business in order for it to grow and prosper. The Maryland Small Business and Technology Development Center (SBTDC) Network, with its Eastern Region headquarters located on the Salisbury University campus, is here to help them. "Businesses must focus on three key aspects for success: Money, Management and Marketing," explained John Hickman, Eastern Region director of the SBTDC. "We provide businesses a continuum of services throughout their life cycle from start up to maturity."

The U.S. Small Business Administration provides grants to colleges, universities and state governments in order to provide business training and advice to both existing and start-up small businesses through its Small Business Development Center (SBDC) program. The State of Maryland recently went through a special accreditation to set up a technology program within their SBDC framework, thus earning the designation of SBTDC. In order to gain this accreditation, a strategic plan and methodology were implemented. A group of consultants was made available to work with the different needs and mechanisms that technology firms require, and specialized training was made available to better assist these businesses.

The Eastern Region SBTDC covers the eight counties on the Eastern Shore from Kent County south to Worcester County. Eastern Region locations include the regional headquarters at SU, a sub-center at Chesapeake College at Wye Mills and an office in Cambridge within the City of Cambridge Office of Economic Development. A counseling office is located in Berlin, MD.

The SBTDC network serves as an entrepreneurial development entity throughout the state. "Because of this statewide network, if a specific expertise is not available in the Eastern Region, we can reach out into our network for co-counseling to assist a business," said Hickman. "Another important aspect of our work is



confidentiality. We pride ourselves on the fact that everything we do for our clients is confidential, unless they ask us for it not to be. For example, a client might request the SBTDC to talk with a lender on their behalf. This working relationship is important because clients want to know that when they come to us to discuss a need for their business, the SBTDC is here to work with them and help them, not to serve as a reporting agency."

Each year, hundreds of clients come to the SBTDC for one-on-one business counseling. Scores of attendees learn about better business practices through training programs. For example, the "Smart Start" prestart business course helps entrepreneurs learn the basics of what they need to do before starting a business. Many referrals are provided to businesses on where to get information, such as a business license.

Often the SBTDC will help a client who has a new idea for a business. "The approach is not to tell them whether it is a good idea or not, but to work with them through planning and guidance, thus allowing the potential entrepreneur to make an informed decision as to the success of their idea," explained Hickman.

Assistance with business expansion is another service provided by the SBTDC. For many businesses, this is harder than the initial start up. SBTDC poses questions to

the business that must be answered in order to make the decision whether the expansion is a logical extension for them. These are not simply market research questions, but internal operational questions. For example, does the business have the internal capacity to manage an expansion, and if not, where are they going to go for that? What does the expansion mean from a personnel standpoint, or from a budgetary standpoint?

### SU Students Serving the Business Community

SU student projects are generally conducted with established organizations. A SBTDC consultant will serve as the lead on a student project. Students meet with business owners who have identified a need, and then the students develop guidelines as to what will be accomplished for that business owner. Students utilize their research, writing and project management skills to accomplish this.

An excellent example of a successful student project was a case of a small family business that had grown well beyond the casual working relationship of related family members. As a result, the business needed a policy and procedure manual. SU students interviewed the owner in order to identify the needs, researched the best practices in that industry, drafted an outline for the manual, and got input on the policies and procedures that would work best for the company. "When the project concluded, the owner had an excellent policy and procedure manual that was put into use," noted Hickman.

These student projects are conducted on an undergraduate level as part of the SU Small Business Consulting coursework. "Student projects range from documenting processes and procedures to market assessment of products, services and marketing avenues," continued Hickman. "Students also are taught the importance of client confidentiality as they go into the business world, preparing them for a professional service firm."



## SU's Role in Entrepreneurship

SU encourages entrepreneurship whenever possible. For example, the Franklin P. Perdue School of Business event, the Bernstein Business Plan Competition, was recently expanded into a three-phase entrepreneurship competition. The SBTDC helped coordinate and design a poster competition called "Invest In My Idea," which was part of the event. They provided training to students in preparing their plan, making sure their idea was communicated well. A panel of judges then chose the businesses in which they would most likely invest. The top 15 finalists from the poster competition went on to compete for the grand prize of \$10,000.

The Eastern Region SBTDC connects the business community to the SU academic community, making sure there is access to the valuable resources available. Often businesses do not know how to uncover the expertise obtainable from educational institutions. The SBTDC helps pave the way to a working relationship.

Internships and employment opportunities often materialize from this collaborative effort. The SBTDC works closely with the Applied Business Learning Experience (ABLE) program through the Perdue School of Business along with the Career Services office, connecting students, graduates and businesses.

## The Pursuit of Excellence

The SBTDC can help your business excel by giving you the opportunity to work with an experienced business consultant on a no-fee, confidential basis; by connecting you to the correct service provider for your business; by working closely with the economic development office in your region to make sure you are connected on a local level so that your project is successful; and by providing valuable information on various funding mechanisms and sources so crucial to success. ❖

## Success Stories: How SU Student Teams Work with Local Businesses

It gives me great pleasure to write this letter of thanks to the Small Business Development [and Technology] Center and the Perdue School of Business for your entire help and great job with scrutinizing MTS Broadcasting and coming up with a great plan that will be a part of this company for years to come.

The Small Business Development [and Technology] Center/Perdue School of Business met with me and my staff to get an idea of what we were looking for as a small business. After that meeting, a partnership was formed and the Perdue School of Business went to work. Investigating the competition and taking our ideals to a new level, they gave us the pros and cons of our business and made significant changes while giving us reasons why the changes were needed, how to implement the changes and showing possible income sources of the changes.

Thanks for all your help and I look forward to working with the Small Business [and Technology] Development Center/the Perdue School of Business again in the future.

Sincerely,  
Troy D. Hill

General Manager

MTS Broadcasting (WAAI -FM, WTDK-FM,  
WCEM-AM/FM), Cambridge, MD



John Hickman, Eastern Region director of the SBTDC, suggested a student project: research the end market for sorghum bagasse. The goal was to develop a cost structure to convert sorghum into a dried stalk that can be stored, and a pelletized material that can be bagged and then sold. The student group, with Lois Haggerty from SBTDC as their mentor, presented their findings to Solar Fruits Biofuels. They included sweet sorghum opportunities, fuel potential, financial information, supporting data, and recommendations to Solar Fruits Biofuels. Jeff Benner and Todd Stephens of Solar Fruits Biofuels were extremely satisfied with the results: "It was an exceptional project. It was on par with several professional consulting reports that I have had prepared for me," said Benner. "It was a great help for us in redirecting our business plan just before we make our final adjustments prior to launching our company."



The team set up a Thank God It's Gluten Free (TGIGF) Facebook page, Twitter and Pinterest accounts for Elizabeth Davis, owner of TGIGF, linked them to her Web site and taught her how to use them effectively. The team also researched gluten-free product tradeshows to attend, generated a list of local restaurants that serve gluten-free menu items, provided merchandising ideas and options, and supplied options for publishing an e-book of recipes. Davis bought an iPhone at their direction and now is blogging, Tweeting and posting photos to Facebook. Elizabeth is ecstatic about the help she received. "The SBTDC has helped me every step of the way from licensing to marketing," she said. "I have gained so much knowledge concerning business development and am truly grateful for the services they provided."



# External Grants Critical for SU's Science, Technology, Engineering and Mathematics (STEM) Programs

**Karen Olmstead, Ph.D.**  
Henson School of Science and Technology Dean  
&  
**Kristen Paul**  
SU STEM Coordinator



**Q:** What current grant-supported activities does Salisbury University have to increase the number of STEM graduates?

**A:** Building on SU's strong tradition of science and math outreach, undergraduate research, and teaching innovation, Dr. Tom Jones (former SU provost and Henson School dean) and others applied for and won a \$996,303 grant from the National Science Foundation (NSF) in 2010 to increase the number of students in five of our STEM majors (chemistry, computer science, earth science, mathematics and physics). The goal of the program, called Bridges for SUCCESS (Salisbury University's Connections to Careers for Every STEM Student), is to increase the total number of graduates in the selected STEM disciplines by 75 percent in just five years. To do this, we have dramatically ramped-up marketing and social media and engaged hundreds of pre-college students in STEM through outreach programs like Science Nights and Science Camp at SU, special lectures, and the Eastern Shore Tournament of the Maryland Science Olympiad held on our campus each spring. When students begin their studies at SU in one of these rigorous STEM majors, we try to increase their engagement and retention through our STEM Living Learning Community, funded research experiences and internships. We also want to reach out to transfer students to make sure their transition to a four-year STEM major is as seamless as possible and are developing a STEM transfer student peer-mentor program.

**Q:** Have you seen any impacts of this NSF-funded program since it started in 2010?

**A:** Yes, we've had tremendous increases in applications to our targeted STEM majors and enrollments are up by about 37 percent overall in these majors. Enrollments are up more than 60 percent in computer science and physics! The number of graduates from our targeted STEM majors is also up significantly, and we anticipate being on target to meet or exceed our goal of a 75 percent increase by 2015 when the NSF grant ends.

**Q:** Who is involved in supporting STEM programs at SU?

**A:** Support of STEM programs is a campus-wide activity at SU. A STEM student might be an information systems major in the Perdue School of Business, or take education courses while majoring in physics in the Henson School or focus on math skills development as an elementary education major in the Seidel School of Education and Professional Studies. In the Fulton School of Liberal Arts, history and English faculty teach specially developed courses in our STEM Living Learning Community. And STEM majors are active in the Bellavance Honors Program, study abroad experiences and student government. It really does take the whole campus to support all of the types of experiences we want to provide SU STEM majors.



**Q:** How do you know that these enrollment increases aren't just the result of more students being interested in STEM careers rather than all the outreach and marketing you are doing?

**A:** Great question! Certainly, more students are being drawn to STEM and health care majors given the good employment prospects in these fields. To determine if the growth in STEM majors at SU was due to our focused efforts or just reflective of a general trend, we compared our growth with other institutions in the University System of Maryland (USM). This comparison clearly showed greater growth in our targeted STEM majors since 2010 (when our funding started) than at other USM campuses. Overall, the total number of students in the five targeted STEM majors at other USM institutions has grown ~10 percent since 2010, while collective enrollment in these majors at SU has grown ~37 percent in the same time period, with even more marked increases in some majors.

**Q:** SU has a national reputation for undergraduate research. Do faculty have grants to support undergraduate research experiences for STEM students?

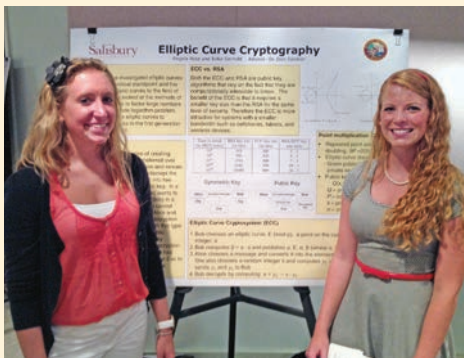
**A:** Absolutely! For example, Dr. Annie Lu in the Department of Mathematics and Computer Science has a \$306,408 NSF Research Experiences for Undergraduates (REU) grant in the area of Parallel Computing. This REU program, called EXERCISE (EXplore Emerging Computing in Science and Engineering), is an interdisciplinary project that explores emerging paradigms in parallel computing with computationally intensive applications in science and engineering. In the EXERCISE projects, students apply emerging parallel computing models within local and distributed parallel processing systems to tackle problems in computer networks and security, image and signal processing, and geographic information systems. The program involves eight students from SU and around the country each summer in funded research experiences.

**Q:** What grant-funded programs does SU have related to teacher preparation?

**A:** Several SU faculty have won grants to support teacher preparation, continuing education for in-service teachers and other K-12-targeted programs. For example, Dr. Ed Robeck in the Seidel School has received funding from the Maryland State Department of Education (MSDE) to develop two new STEM education courses in partnership with science faculty and Ward Museum staff that help teachers make STEM instruction highly relevant and up-to-date. Dr. Robeck and other faculty also are working with local school districts on Race to the Top-funded projects to encourage teachers' use of current technologies in instruction, including digital cameras, GPS devices, digital microscopes and QR codes, and to develop elementary STEM liaisons with respect to integrating STEM standards into core instruction. Dr. Anjali Pandey in the English Department won a \$2 million grant from the U.S. Department of Education to aid rural Delmarva teachers in better assisting English learners, especially in STEM. Hers was the only Maryland proposal funded in the 2011 competition.

**Q:** How can I get involved in SU's STEM efforts?

**A:** We are always eager to have volunteers for student mentorship, our outreach activities and to support the development of professional networks for our graduates. We also seek funding for scholarships, student travel and research, and the Eastern Shore Tournament of the Maryland Science Olympiad. If you are interested in getting involved in STEM at SU, please contact us at [stem@salisbury.edu](mailto:stem@salisbury.edu) and check out our activities at: [www.salisbury.edu/henson/stem](http://www.salisbury.edu/henson/stem) ❖





# Checking In: Doctor of Nursing Practice (D.N.P.) Year One

## INNOVATIVE PROGRAMS



*By Lisa Seldomridge, Ph.D., Professor and Nursing Department Chair;  
Molly Parsons, Ed.D., CRNP, Associate Professor and Nursing Department Director of Graduate and Second-Degree Programs;  
& Rita Nutt, D.N.P., Assistant Professor, Nursing Department*

The first offering of the D.N.P. was for experienced professionals with master's degrees in nursing. These students are completing a 38-credit post-master's curriculum so they can move into leadership roles within their respective organizations, be innovators in healthcare practices and shape policies to improve healthcare outcomes. We expected these students to be very bright, highly motivated, accomplished professionals – and they have exceeded our expectations!

Students in the current program come from a variety of nursing roles in the community, with many of them serving in more than one professional capacity. Several of them are employed in area hospitals as Clinical Nurse Specialists, Nurse Practitioners, educational leaders and executives. One student holds dual certifications as both an Adult/Geriatric Acute Care Nurse Practitioner and as a Family Nurse Practitioner (FNP). He works as a Nurse Practitioner at Peninsula Regional Medical Center in the Emergency Department and in Occupational Health. Another student is certified in Critical Care Nursing and works at Peninsula Regional Medical Center providing clinical care in different settings, including the emergency department, intensive care unit, and medical-surgical areas. A third student is a Clinical Nurse Specialist for Shore Health System and works as an educator and clinical resource for hospital staff.

Other students come from the academic world and are currently employed as faculty in area nursing programs, including Salisbury University, Wor-Wic Community College, Chesapeake College and Wesley College. The educational responsibilities of the D.N.P. students vary, but include the coordination of clinical resources for nursing students, classroom teaching, and clinical instruction and supervision in numerous healthcare settings.

Clinical simulation has become a mainstay in nursing education, and some of the current D.N.P. students have an active role in using simulation to educate nursing

students and/or colleagues. One D.N.P. student is the clinical simulation coordinator for Chesapeake College, while another is the coordinator of the nursing resource labs at SU. Both of these nursing educators use simulated patient-care experiences with nursing students as well as nursing professionals to develop and refine clinical decision-making skills in a safe setting, with no risk to themselves or their patients.

Current D.N.P. students also are employed in healthcare administration, including a regional-care coordinator for a large private health insurance company who is instrumental in establishing a new model of healthcare delivery across the Eastern Shore. Known as "medical homes," this multi-professional approach will provide more coordinated, cost-effective care mandated by recent Affordable Care Act legislation.

D.N.P. students culminate their program with the completion of a comprehensive doctoral project. Our students are encouraged to identify their project focus early in the program and the foundation for these projects begins in one of their first courses where they identify a problem and possible interventions/strategies to improve patient outcomes. They then turn to the evidence – research studies that compared these interventions/strategies – to determine which was most effective. These projects have the potential to make important healthcare changes and will have a significant impact on the health of the populations they serve.

One student recognized that oral health is a significant problem in elderly residents who live in long-term-care (LTC) facilities. She examined the research evidence to see if an oral-health education program for nurses could improve the identification of oral-health issues within this population. The evidence clearly demonstrated that oral-health education improved staff compliance with proper oral-health maintenance as well as the identification of oral problems. The student made a clinical recommendation that all nurses working in LTC facilities undergo a



multi-faceted education program that includes not only the steps in the oral-care process but also identifying signs of dental problems and tools for managing difficult resident behaviors.

Another student who currently works in occupational health as an FNP questioned which type of pre-employment examination – physical exam versus focused functional exam – provided the greatest reduction in the number of workplace injuries. A physical examination is considered a more generic type of exam and incorporates a health history and head-to-toe assessment; whereas, a functional exam uses more targeted assessments based on the physical requirements of a specific job. The evidence indicated that the functional examination was a better indicator of whether an individual was up to the physical demands of a job and would therefore reduce work-related injuries. As a result of this project, the student developed a Clinical Practice Guideline (CPG) with the goal of providing healthcare practitioners with the latest evidence recommendations as they make decisions about pre-employment examinations.

A third student was interested in comparing single-use blood pressure (BP) cuffs with multi-use BP cuffs on the incidence of hospital-acquired infections. The evidence clearly identified that when single-use BP cuffs were used, infection rates were lower. Despite this finding, many hospitals continue to utilize a multi-use BP cuff that is cleaned between patients rather than a disposable single-use BP cuff because of the price differential. This procedure represents a departure from evidence-based practice, and the student developed a clinical practice



guideline to recommend disposable BP cuff use. As this project continues to evolve, the student will make a case that single-use cuffs are a fiscally responsible choice when compared to the cost of treating hospital-acquired infections.

As their research is proving, the post-master's D.N.P. curriculum was designed to develop nursing leaders who would work to

improve the quality of healthcare and ensure better patient outcomes in the future. In this first year of the program, students have learned about information technology and informatics, and the many ways that medical data can be collected and used to monitor and change healthcare practices. They also have studied organizational leadership and how to work with health professionals from a variety of disciplines. Most recently, they engaged with legislators in Annapolis to see how health policy is shaped and what is required to make changes at the state level.

As we look beyond this year, a logical, next step is creating multiple paths of entry for the D.N.P. program. Beginning in fall 2014, we offer a new option for those with a B.S. in nursing who wish to become Family Nurse Practitioners while earning a doctoral degree. These credentials (FNP with D.N.P.) will be necessary as all advanced practice nursing moves to require a doctorate. The 80 credit post-B.S. to D.N.P. curriculum will blend existing FNP master's-level courses with D.N.P. courses.

Ultimately, we envision three routes to a D.N.P. at Salisbury University: Option 1 for those with a master's degree in nursing who wish to earn a D.N.P. with a focus on leadership; Option 2 for those with a master's degree in nursing who wish to earn D.N.P. and FNP credentials; and Option 3 for those with a B.S. in nursing who wish to earn D.N.P. and FNP credentials.

Stay tuned to our website ([www.salisbury.edu/nursing/dnp](http://www.salisbury.edu/nursing/dnp)) as this exciting and innovative program evolves. ❖



Members of the first D.N.P. cohort of students: (standing from left) Kimberly Allen, Annette Hall-Barnes, Kathryn Fiddler, Deana Kenney, (seated from left) Amy Stafford, Stacey Kram, Aaron Sebach, Lisa Tayman and Heather Westerfield

## Faculty Mini-Grant Program

The SU Faculty Mini-Grant Program provides awards up to \$2,500 to encourage faculty to develop research, scholarly or creative programs that provide the potential for sustained professional development and extramural support. It is intended to support faculty in areas that traditionally have difficulty securing funding to increase their research and scholarly activities output. The following is an overview of this year's awardees.

### How Does My Tan Look?: Understanding the Influence of Peer and Expert Source in Comparative Tanning Risk Perception Among College Students

*Vinita Agarwal, Ph.D.*

*Assistant Professor, Communication Arts*

Recognizing that findings suggest awareness of the risks associated with tanning lamps does not lessen use among college students, Agarwal is exploring the influence of messaging on these behaviors.

Agarwal proposes to demonstrate the influence of comparative risk and message source type (peer, authority) on tanning behaviors. There is a gap in understanding of how a comparative risk message source (peer or authority) influences tanning behavior decisions among young adult women. Understanding the contribution of message source in the context of comparative risk perception is important because the greater contribution of comparative risk presentation as compared to absolute risk information presentation has been demonstrated for areas such as breast cancer risk assessment.

This research investigates the influence of source on tanning lamp use messages as well as the contribution of comparative risk in tanning message design. Because of the greater influence of peer sources in this age group, it is hypothesized that a message coming from a peer source — particularly one that targets beliefs of attractiveness and healthy appearance as an outcome of tanning — might be more persuasive than the same message coming from an authoritative source.

### Changing Literacy Skills: What Readers Need Today

*Laurie Andes, Ed.D.*

*Professor, Teacher Education*

Andes considers, given the present rate of change in the types of literacy materials and media available to readers today, what literacy skills are needed by current readers? What are the most effective teaching strategies that should be employed by literacy professionals today?

An examination of 19th and 20th century literacy materials reveals that the approaches to teaching literacy skills have remained fairly consistent over the last 200 years in the United States. Many of the teaching strategies, adapted from those used in the United Kingdom in the 18th century, can be found in classrooms today.

In contrast, 21st century literacy activities include reading e-books, evaluating and using Web sources, and writing for and with multicultural team members. Andes explores what literacy skills are needed by literate individuals to enable these modern activities. Data collected by teacher candidates in the University's May Literacy Center on children's digital literacy skills serve as a baseline for this and further investigations.

### Mixing Messages and Methods: Examining News Content From News Publications on Facebook and Twitter

*Jennifer Cox, M.A.*

*Assistant Professor, Communication Arts*

Cox examines Twitter and Facebook postings from a random sample of five U.S. daily newspapers focused on local coverage during a two-week period to determine what types of stories get posted on the social media sites, what news topics and values those stories possess, and at what time the stories are published to find out whether certain types of stories get published at certain times more than others.

Cox anticipates Facebook will feature more lifestyle, user-friendly and oddity stories that attract attention; whereas, news organizations will use Twitter more for breaking crime, political and other forms of hard news. She also anticipates lengthier issues-based stories will come out in the morning when workers are just beginning their day; whereas, event-based stories will appear in the afternoon when the events occur and when workers are thinking about their weekend and evening plans.

If news content differs across social media platforms and throughout the day, readers are left without valuable pieces of information. Twitter and Facebook also allow people to share information within communities faster, which could lead to emphasis of some issues over others and even misinformation.

### Who's On First: A Case Study of Internal Communication in a Growing Non-Profit Organization

*Lori DeWitt, Ph.D.*

*Assistant Professor, Communication Arts*

As a human communications scholar, DeWitt has an interest in the communication systems of Non-Governmental Organizations (NGOs) and Non-Profit Organizations (NPOs). She proposes a comprehensive case study assessment of the internal communication structures of the Salisbury-based Hope and Life Outreach (HALO), a local NPO that serves the area homeless population.

HALO has grown rapidly and now provides over 70,000 meals a year to the area's homeless. It also operates a day center for education and training services, a shelter for homeless women and children, and a thrift store. HALO employs a staff of four and relies on over 700 volunteers. This rapid growth has made a huge impact on the homeless community, but the number of volunteers has become difficult to manage and successful communication structures are needed to further growth.

DeWitt is observing City Union Mission in Kansas City, MO, an established organization that has achieved many of the goals to which HALO aspires. She is conducting a thorough communication audit of HALO and developing a clear assessment of their internal communication processes and identifying areas of strengths and weaknesses.

## Opting Out on the Bill: Voluntary Adequacy Funding in Maryland

Maida Finch, Ph.D.

Assistant Professor, Education Specialties

Finch is researching the following questions: What have been the implications of Maryland's 2002 voluntary push for adequate and equitable funding in K-12 education?; How do outcomes differ for districts that provided an equitable education as opposed to those who did not?; and How has state equity been impacted as a result of the decisions in some districts to not increase funding to the "adequate" level?

To answer these questions, she is collecting data on the "net local appropriation" and the "maintenance of effort" for each of Maryland's 24 districts from 1992-2012. Finch also is including district-level information on student achievement, demographic statistics, enrollment and student-teacher ratios. These data are supplemented with qualitative material on Maryland's state assessments. She is constructing a database that consolidates this information and permits statistical analyses to answer her research questions.

By investigating a voluntary school reform policy, it allows Finch to make an initial exploration of the generalizability of research on court-mandated reforms. Do the principles of adequacy and equity provoke similar results in Maryland? Does a voluntary policy produce different results in terms of equalizing school finance?

## A Multi-Cultural Comparison of an End-of-Life Decision-Making Educational Intervention

Katherine Hinderer, Ph.D.

Assistant Professor, Nursing

Hinderer is exploring the effects of an advanced care planning (ACP) educational intervention on knowledge, attitudes and advanced directive (AD) completion rates in community-dwelling adults from different cultural backgrounds.

Specifically, she aims to explore the effect of ACP education on knowledge, attitudes and AD completion rates in community-dwelling adults in the community that Salisbury University serves and to study the effects of ACP education on knowledge, attitudes and AD completion rates in Chinese-American community-dwelling adults.

Hinderer's study is intended to build on pilot work conducted in 2011 and 2013. Feasibility studies have been conducted in both community-dwelling adults in the community SU serves and in a group of Chinese-Americans. This proposal moves the project forward in several ways. It supports an additional educational offering and study that would directly benefit residents of the local community by providing funding necessary to offer another seminar. She proposes to use pilot findings to improve upon the format of the original project and explore a population who has not been widely studied in regard to ACP: Chinese-Americans.

## Genes, Behavior and Evolution: In Two Species of Frogs

Kim Hunter, Ph.D.

Professor, Biological Sciences

Hunter is examining how two signal components interact to influence mate choice in two species, the spring peeper (*Pseudacris crucifer*) and túngara frog (*Physalaemus pustulosus*). Comparing the two promises to provide a deeper understanding of how signal combinations are perceived by individual receivers and how this generates selection for signal diversity.

Specifically, Hunter's goal is to understand how the call and vocal sac interact as a complex signal to influence female mate choice. For humans, watching a speakers' lips in noisy environments improves speech comprehension. She hypothesize that a similar process may be occurring in frogs.

She is examining how individual signal components (audio + visual) are weighted in each species. Hunter is determining how females of each species respond to isolated acoustic signals, visual signals and variations of these in composite. In addition, she is collecting genetic samples from both males and females of mated pairs for microsatellite analysis. Individual microsatellite data is compared to male signal value (measures of vocal properties) and with female mate choice in experiments in the behavioral experiments.

## Vascular Dysfunction in Animal Models of Muscular Dystrophy

Victor Mirel, Ph.D.

Associate Professor, Biological Sciences

In view of the paucity of data regarding the role of the dystroglycan complex in vascular physiology and pathophysiology, Mirel is determining the extent and location of vascular dysfunction in animal models of muscular dystrophy by studying isolated vascular segments in vitro.

Muscular dystrophy is a family of diseases caused by mutations in genes encoding proteins that form the dystroglycan complex and lead to skeletal and cardiac muscle dysfunction. While mutations in the dystrophin gene lead to the most common forms of muscular dystrophy, mutations in genes encoding other proteins of the dystroglycan complex can lead to other forms of muscular dystrophy. The skeletal muscle and cardiac muscle pathologies associated with these mutations are well documented, but more recently it has become appreciated that components of the dystrophin-glycoprotein complex are expressed in vascular smooth muscle and the vascular endothelium found in blood vessels.

Several groups have postulated that alterations in the dystroglycan complex may explain the abnormal vascular responses reported. Some studies have suggested that vascular dysfunction contributes to the cardiac and skeletal muscle dysfunction seen in muscular dystrophy; however, few of these studies actually tested vascular function.

### **Data Collection and Archival Research at the University of the West Indies - St. Augustine for a Book Chapter and Proposal**

**Darrell Newton, Ph.D.**

*Associate Professor, Communication Arts*

Newton has been asked to contribute to an anthology for Oxford University Press on BBC radio and its influence upon musical genre and audience reactions. He is writing about Caribbean transnational radio broadcasting by the BBC, focusing upon musical styling. The anthology's co-editors propose to bring together 12 different points of view about music and radio, using the BBC as a point of departure.

Newton is researching at the University of the West Indies - St. Augustine, which recently was awarded the sound and written archives from the BBC's Caribbean Service. This new information includes a series of contemporary transnational radio broadcasts, notably the *Calling the Caribbean* programs (1939-2011) that featured musical interludes, letters read by West Indian troops to families in the islands and social commentary.

Newton is examining programming and printed documentation that relates to programming decisions, schedules for radio shows and broadcast scripts. This material will help to inform their ultimate impact upon well over five million West Indian listeners.

Newton is also using portions of his research for his *Calling the Caribbean: BBC West Indian Radio* book proposal.

### **Body Encounters and Affective Ties Between the Naval Officer Eduardo Massera and Marta Lynch During the Argentinean Military Dictatorship**

**Corinne Pubill, Ph.D.**

*Associate Professor, Modern Languages and Intercultural Studies*

At the 2013 Pacific Ancient and Modern Language Association Conference, Pubill explores the representations of affective ties in Marta Lynch's novel *Informe bajo Llave* (*Locked Down Report*) as they are shaped by the context of political violence and repression.

Pubill concentrates on Lynch's last novel *Informe bajo Llave*, written in 1983 — two years before her suicide. This novel emphasizes the psychological, as well as the physical violence, perpetrated by Admiral Massera during the Argentinean military dictatorship. *Informe bajo Llave* stands out, thanks to a discourse based on the abuse of power through violence and sexuality, to form part of the direct testimony of Argentina's collective memory that positions Lynch's work at the center of current critical debate.

Pubill demonstrates that the character of Adela personifies the destiny of a whole nation where the construction of the country, by way of being a masculine project, rules out female intervention and does not allow another way out except in death, uniting themselves to the fate of an entire generation of intellectuals and people with progressive ideas for Argentina in the '70s and early '80s.

### **Building Inclusive Communities Through Peaceful Play: Strategies for Resolution to Conflict in Sport**

**Dean M. Ravizza, Ph.D.**

*Associate Professor, Health and Sport Sciences*

Ravizza explores the inherent opportunities in sport to empower key stakeholders in the Gulu and Kitgum districts of Northern Uganda to strategically respond to conflict within school and community-based youth sport programs. In doing so, his project tests strategies for resolution to conflict in sport and analyzes the timing and effectiveness of these strategies to promote more inclusive playing environments with the goal of transferring such strategies to conflicts of low intensity outside the sport setting.

More than five years since the ceasefire brokered between the government and the Lord's Resistance Army, the focus of peace-building activity in the former conflict region of Northern Uganda has been on recovery. Despite concentrated efforts to rebuild communities, renew livelihood activities and tackle the root causes of conflict, low-intensity disputes still remain potent at the community level, creating a need to build local capacity to resolve conflict.

Ravizza's project works with education and sports officials and NGOs to include training sport teachers, community coaches and youth in the implementation of conflict resolution strategies through a series of field-based workshops.

### **Warring with a Long-Distance Enemy: The Politics of Tamil Diaspora and the Sri Lankan State**

**Ignaciyas Soosaipillai, Ph.D.**

*Assistant Professor, Conflict Analysis and Dispute Resolution*

Soosaipillai studies the Sri Lankan Tamil diaspora projects in the United Kingdom and the way the Sri Lankan state responds to these projects. The Sri Lankan Tamil diaspora has become very active in the West following the military defeat of the Liberation Tigers of the Tamil Eelam, the predominant militant group that spearheaded the violent struggle against the Sri Lankan state.

Soosaipillai's research sheds light on the reasons and the way diaspora communities mobilize members of the community and carry out a political campaign against the government of the homeland, and the strategies government of the homeland use against a hostile diaspora. Tension between the Sri Lankan Tamil diaspora and the Sri Lankan government has created serious law and order issues in the West. A better understanding of the issues may help deal with the conflict more effectively.

Soosaipillai is collecting primary data in the U.K. mainly through key informant interviews and through observation methods. He is paying particular attention to the operation of the Global Tamil Forum, which is one of the major Tamil organizations operating in the West.

# The SU Foundation: 40 Years of Academic Support

By Jason E. Curtin '98, Assistant Vice President for Development and Alumni Relations

This year, the Salisbury University Foundation, Inc. is celebrating its 40th anniversary. The mission of the Foundation, created in 1973, is "to accumulate funds, by gift and investment, and to foster, encourage and enrich the activities, educational programs, athletics and scholarships of Salisbury University." Furthermore, it is the intent of the SU Foundation to promote, sponsor and carry out educational, scientific and charitable purposes and objectives for the benefit of SU and its students. Through the generosity of major benefactors, corporations and foundations, faculty, staff, parents, alumni, and friends, the SU Foundation is fulfilling its promise to the SU community.

## Research and Scholarship Funds

When thinking about graduate studies and research and the SU Foundation's contributions to these activities, it all starts with people: specifically our students, faculty and staff. Over the past 40 years, many donors have put their resources back into our students and research opportunities. One shining example is the Guerrieri Research Fund, which was established in 2000. It provides financial support for new science equipment purchases, scientific instrumentation, laboratory materials and, specifically, program support for undergraduate research, research grants, materials and fellowships.

Another example is the Edward H. Nabb Research Center for Delmarva History and Culture. Through the generosity of one



Guerrieri Research Fund



Edward H. Nabb Research Center for Delmarva History and Culture



Salisbury University Graduate Fellows Program

donor's estate, the Robert Parker Fondes Research Fellowship was established. Its purpose is to support a fellowship(s) for research to be done at the Nabb Research Center for a scholar(s) studying Chesapeake history or some facet of Chesapeake culture. The scholar(s) should be pursuing or have obtained an advanced degree.

## Graduate Fellows Program

Graduate education has become an important component of SU's distinction, with the number of graduate students and programs steadily growing. In fall 2012, SU began offering its first doctoral degree, a Doctor of Nursing Practice. There is much demand for high-quality graduate students to help strengthen our research, scholarly and teaching activities. In order to attract high-achieving graduate students, funding opportunities need to be created that are competitive with our peers. To that end, SU and the SU Foundation have created the Salisbury University Graduate Fellows Program. This fellowship program is designed to attract high-quality applicants who intend to enroll full time in an SU graduate program and is open all United States citizens. It is granted based on a formal nomination and evaluation process supervised by the dean of graduate studies. Each award is \$5,000 per year for up to two years.



## Holloway Society Honors SU's Legacy of Giving

*The Holloway Society is a new SU Foundation giving society established to celebrate Salisbury University's heritage and honor Founding President William J. Holloway by recognizing those who have made planned-gift provisions for the University. As we look to the future, there are a number of opportunities that can allow individuals to support research efforts and graduate education at SU. Members of the Holloway Society help build the Foundation's endowment through tax-deductible gift arrangements. Planned-giving opportunities include:*

### ■ Bequest

A bequest is the simplest and most traditional way of giving through your will, either as a specific sum, a specific percentage of your estate, or the rest and remainder of your estate after debts, taxes, expenses and specific bequests to your heirs.

### ■ Charitable Gift Annuity

A charitable gift annuity is a simple contract between you and the SU Foundation that offers a tax-advantaged way to provide for income during retirement. In the future, your gift will provide support for Salisbury's mission. You can begin to receive income right away or at a

predetermined future date. You also can decide when the income payments begin within a future time frame, determined when you make your gift. In any case, your income is taxed at a favorable blended rate.

### ■ Charitable Remainder Trust

A charitable remainder trust is created when you irrevocably transfer cash, securities or other property to a trustee, who may be yourself, the school, a bank or another individual. This trust provides you with income during your lifetime. Upon termination of the trust, the principal would pass on to the SU Foundation.

### ■ Charitable Lead Trust

A charitable lead trust provides for the payment of income to SU and /or charitable beneficiaries selected by you for a period of years. Upon the expiration of the trust, the remainder reverts to you or to members of your family, as you choose.

### ■ Other Planned-Giving Options

You might also consider naming the Salisbury University Foundation, Inc. a beneficiary of the remainder of a pension fund or an IRA; transferring ownership of a life insurance policy to the SU Foundation; or donating art, a home or other property to the school.

*The SU Foundation staff hope you will include Salisbury University when you are considering your lifelong financial planning priorities and with it, a way to support your interest in graduate studies and research. If you would like to talk further about these opportunities, please contact me at 410-543-6176 or [je Curtin@salisbury.edu](mailto:je Curtin@salisbury.edu). ❖*

## Graduate Research and Presentation (RAP) Grant Program

The Office of Graduate Studies and Research provides research grants, up to \$500, to help support graduate students develop research and scholarly projects with a faculty supervisor and present their projects at various conferences and meetings. The program enables students to receive recognition for their work and provides networking opportunities and professional development in their field of study.

### Population Trends of Forest Interior Birds of the Lower Delmarva Peninsula

**Marshall Boyd, Applied Biology (Fall & Spring Semester Awards)**

Chandler S. Robbins et al. (1989) studied forest habitat requirements of breeding bird species in the Mid-Atlantic states from 1979-1983, using point counts to sample bird communities. Boyd is re-sampling each point from the Robbins' study within the Lower Eastern Shore of Maryland. Forests were sampled during the breeding season from mid-May through the beginning of July in 2012 and 2013. Each point was visited three times per season, but only sampled once per day. Forest variables quantify the habitat of the study forests in accordance with the parameters set by the study. Vegetation surveys measure several variables and are conducted once at each candidate forest.



its members embracing prohibition around the turn of the 20th century. Harlow is researching the Eastern Mennonite University archives for church conference minutes and letters between church leaders, and the University's historical library for copies of the *Gospel Herald*, the quasi-official church paper, published from the late 1800s. He also explores the *Sword and Trumpet*, an opinionated unofficial magazine arguing for the embrace of fundamentalism.

### The Writing Center as the Bridge: How To Create Exigency for Writing and Stabilize a Writing Center; or, A Call for Workplace Writing in the Writing Center

**Alexandra Guerriero, English**

Guerriero explores if writing center workshops with a focus on workplace writing help to develop student exigency for writing and if outside community interaction with the writing center helps create a more stable environment for a writing center in the university. She is surveying students at York College to assess their perceptions of writing and writing needs and purposes, and whether they see transfer from the writing they do in their coursework to their future careers. She also is surveying 40 employers that tend to hire York College graduates to determine what writing and rhetorical concepts new hires with recent college degrees should know.

### What Caused the Mennonites of Virginia to Embrace Abstinence on an Institutional Level?

**Timothy Harlow, History**

Harlow explores how social changes following the Second Great Awakening, which saw a decline in alcohol consumption, interacted with Virginia Mennonites, who had long tolerated moderate use of alcoholic beverages prior to

### Altering Microalgal Nutritive Qualities Through the Use of Microbial Symbionts

**Stephen Kelly, Applied Biology**

Kelly's research seeks to further study the relationship between pink-pigmented facultative methylotrophs (PPFM) and microalgae, an important food source for larval shellfish such as oysters and clams. Kelly is using over-producing strains of PPFM to increase nutrient levels in microalgae, which would then be used as feedstock for oyster larvae. If higher levels of vitamin B12 can be produced in microalgae through the use of PPFM, it could reduce the need for expensive B12 supplementation by hatcheries, and may help improve larval oyster growth. He also is examining the physical association between PPFM and microalgae to determine if the bacteria are attached to the cell surface or free-living in the water.

### Geographic Call Variation, Mate Choice and Genetic Influence in the Spring Peeper (*Pseudacris crucifer*)

**Krispen Laird, Applied Biology**

**Kelsey Mitchell, Applied Biology**

**Kyle Wilhite, Applied Biology**

The spring peeper is a North American arboreal frog that ranges from southern Louisiana to Canada and as far west

as Minnesota. In early spring, the male frogs congregate at ponds and vocalize to attract mates. Females arrive at the pond and evaluate potential mates based on their vocalizations. Laird, Mitchell and Wilhite are completing a thorough data set of natural male calls for spring peeper populations in both Maryland and Louisiana. A complete call data set will enable geographic variation in male calls to be detected. A southern-to-northern cline occurs in many species; whereby, traits show changes commensurate with variance in geographic location.

### Microsatellite Genotyping and Female Mate Choice in Spring Peepers (*Pseudacris crucifer*)

**Kelsey Mitchell, Applied Biology**

Mitchell examines how female mate choice in the spring peeper, a species of North American tree frog, provides a mechanism driving the diversity of animal traits and the genetic basis underlying female preference and mate choice at the individual level. Males produce vocalizations in order to attract a female mate, and the females evaluate these calls to choose a mate. In most frog species, females exhibit strong preferences for specific characteristics of male vocalizations. In addition to male call pitch, Mitchell is testing female preference for other call characteristics, including call duration and call rate to determine whether female choice is operating on a parameter other than pitch.

### Collapsing Student Hierarchies: Assessing and Addressing the Needs of Graduate Students in the Writing Center

**Molly Phelan, English**

Phelan studies whether the graduate students frequenting the SU Writing Center are receiving all the help they need by researching what methods have been used to assist graduate students in writing centers and exploring what aspects of these methods would be helpful at SU. She is researching graduate student needs and their perceptions of the Writing Center. She also explores the services graduate students and professors would like to develop at the Writing Center. Phelan is performing need-assessment surveys of graduate students and faculty, and focus groups of graduate students who frequent the Writing Center and those who do not.

### Species Diversity and the Succession of Dung Beetles to Horse Dung on Assateague Island

*Elizabeth Rentz, Applied Biology*

The objectives of Rentz's research are to determine the species diversity of dung beetles on Assateague Island throughout the three habitats and to determine whether the dung beetles are attracted to the horse dung on the island. Dung beetles are coprophagous scarabs widely known for feeding on and breeding in mammalian dung. There are currently over 160 feral horses on the Maryland side of Assateague Island. As the population of horses has grown, problems with destruction of the island's natural habitats have been occurring. This overgrazing on the beach grasses could continue to harm the dune habitats if no action is taken.

### Developing an In Vitro Assay to Study Angiogenesis Using the Dissected Mouse Aorta

*Kavya Shroff, Applied Biology*

Shroff is developing an in vitro assay to study angiogenesis using dissected mouse aorta. Angiogenesis is the sprouting of new capillaries from pre-existing vessels, resulting from stimulation of the endothelial cells that line the vessel wall. Due to its potential as a therapeutic target and its participation in numerous pathological conditions, it is important to understand the biochemical and cellular mechanisms that regulate this process. New strategies for treating these diseases involve the regulation of angiogenesis, and in vitro methods such as the one proposed by Shroff are used to screen potential therapies.

### HDL Independent Mechanisms of Nicotinic Acid

*Joseph Tracey, Applied Biology*

A 2001 trial suggested that niacin (nicotinic acid) provided additional protection against atherosclerosis, hardening of the arteries, when added to standard treatment. Tracey suggests that for niacin to be advocated as a potential anti-atherosclerosis treatment, a better understanding of the cellular targets is needed. He is using the LDL receptor knockout mouse in combination with a high-fat diet to replicate the disease. In the absence of an LDL receptor, the liver will not be able to remove LDL from the blood stream leading to widespread atherosclerosis. This disease model effectively mimics human atherosclerosis and makes it possible to study niacin's LDL receptor independent mechanism of action.

### Facilitating Basic Writers' Progress: The Impact of Feedback and Confidence on Student Writing

*Kathryn Trantin, English*

Trantin proposes a quantitative descriptive study that will serve to identify the styles of teacher feedback that are most conducive to improvements in basic writers' motivation, self-awareness, confidence and, hence, improved writing. She is studying a basic writing course and monitoring students' confidence, self-awareness and motivation through surveys and interviews; improvement through graded papers and rubrics; and teacher feedback by coding responses on drafts, rubrics and feedback provided during conferences. She aims to determine what styles of feedback instructors should use to best serve their students' needs and to identify a relationship between confidence and improvement.

### Return to Sender: Authentic Audience and a Haphazard Community of Writers

*Jessica Weber, English*

Weber's research focuses on the benefits of community engagement writing events held within the campus community, particularly with the combined efforts of writing centers and student-run extracurricular groups. She posits that these events can produce multiple benefits for students, faculty and the community as a whole. Specifically, she is looking into how students' senses of audience, purpose and self-efficacy can be improved with this proposed model. Weber is developing her methodology into a portable and potentially sustainable model so that other universities can also explore the benefits of these types of extracurricular programs.

### Secondary Metabolite Comparison in the Polyploids of a Dominant Desert Shrub (*Larrea tridentata*) & Interactions Within a Desert Ecosystem: Utilizing Citizen Science to Investigate the Role of Nordihydroguaiaretic Acid in the Success of the Dominant Shrub (*Larrea tridentata*)

*Kristin Zuravnsky, Applied Biology*

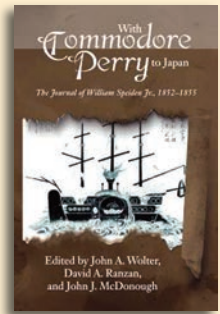
Zuravnsky is investigating the role nordihydroguaiaretic acid (NDGA) might play in the survival of *L. tridentata* in its extreme desert environment. Preliminary data reveals significant correlations between ploidy level, season (temperature) and NDGA concentration from a select few *L. tridentata* grown in a greenhouse. She is pursuing a two-part project to first analyze field-collected samples from each ploidy collected by Citizen Scientists, and then analyze samples from 30 plants that were maintained in the lab. Zuravnsky is analyzing the lab-collected samples and quantifying the concentrations of NDGA from these samples to serve as a comparison to the natural environment.

### With Commodore Perry to Japan: The Journal of William Speiden, Jr.

*Co-edited by David Ranzan  
University Archivist,  
Blackwell Library*

The text offers a personal account of Commodore Matthew Calbraith Perry's expedition to Japan through the eyes of a 16-year-old purser's clerk of the U.S.S. *Mississippi*. The documentary edition, endorsed by the National Historic Publications and Records Commission, provides excellent coverage of the political mission of the Perry expedition, the opening of relations with Japan and of the social history of a naval warship as well. Also included are 55 illustrations ranging from hand-drawn, pen-and-ink scenes of everyday life sketched by Speiden and other members of the crew to exquisitely detailed pith paintings by Chinese artists.

Naval Institute Press, 2013



### Biological Science, 5th Edition

*Illustrated by Kim Quillin.  
Lecturer, Biological Sciences*

Research indicates that true mastery of content requires a move away from memorization toward active engagement with the material in a focused, personal way. *Biological Science* is the first introductory biology text designed to equip students with a strategy to accurately assess their level of understanding, predict their performance and identify the types of cognitive skills that need improvement.

Pearson Higher Ed, 2013

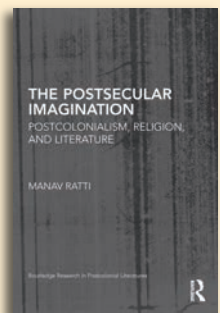


### The Postsecular Imagination: Postcolonialism, Religion, and Literature

*By Manav Ratti  
Assistant Professor, English*

Ratti presents a rich, interdisciplinary study of postsecularism as an affirmational political possibility emerging through the potentials and limits of both secular and religious thought. While secularism and religion can foster inspiration and creativity, they also can be linked with violence, civil war, partition, majoritarianism and communalism, especially within the framework of the nation-state. Through close readings of novels that engage with animism, Buddhism, Christianity, Hinduism, Islam and Sikhism, Ratti examines how questions of ethics and the need for faith, awe, wonder and enchantment can find expression and significance in the wake of such crises.

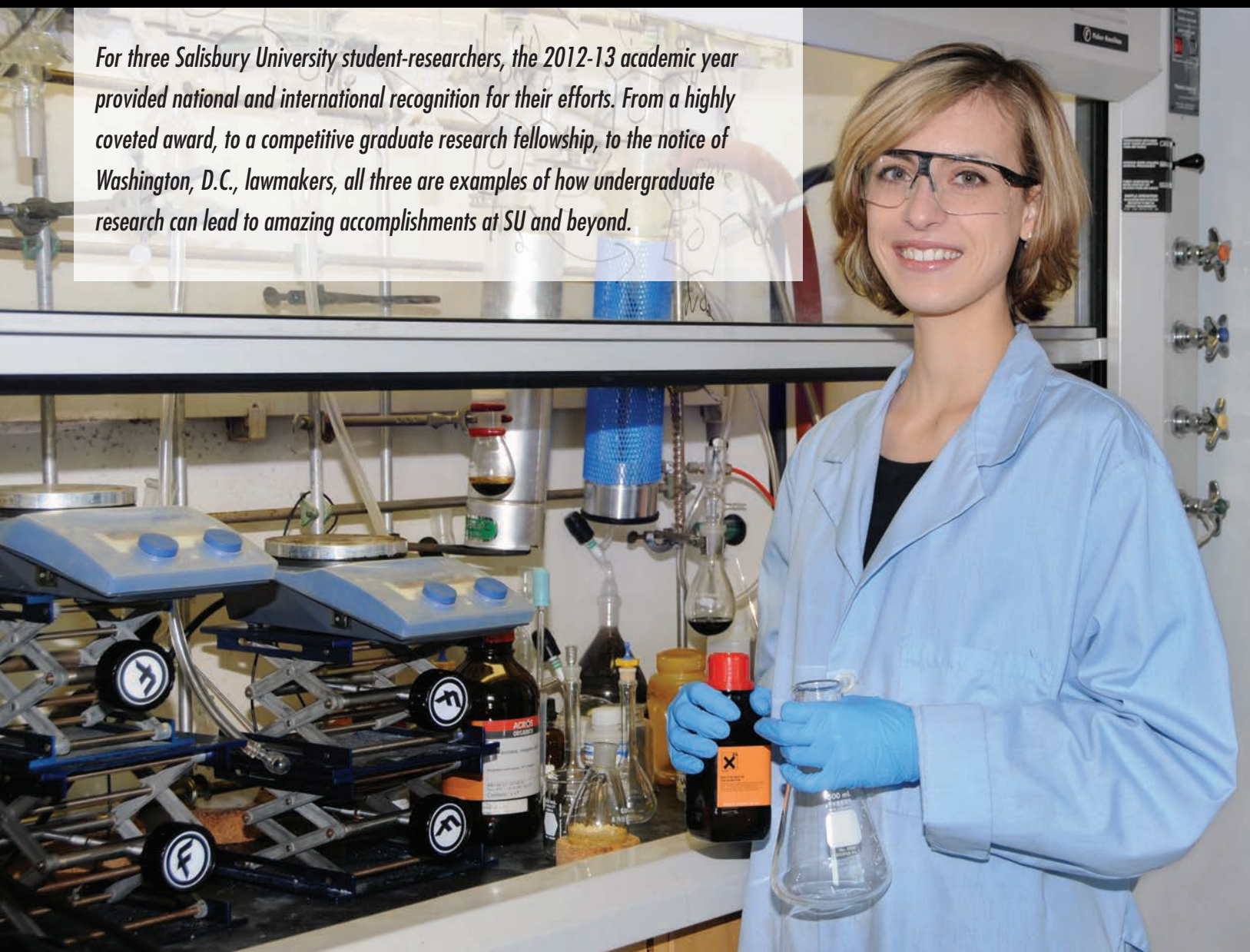
Routledge, 2013



*Books identified as of May 2013.*

# A Banner Year for Student Research

*For three Salisbury University student-researchers, the 2012-13 academic year provided national and international recognition for their efforts. From a highly coveted award, to a competitive graduate research fellowship, to the notice of Washington, D.C., lawmakers, all three are examples of how undergraduate research can lead to amazing accomplishments at SU and beyond.*



## **Cambridge Bound**

Dominique Kunciw earned one of the world's most prestigious international scholarships, the Gates Cambridge award, to explore the development of drugs, especially for antibiotic-resistant diseases. In the process, she is fulfilling a lifelong dream to study near her birthplace in England. Chemistry major Kunciw — whose father Bohdan teaches in SU's Mathematics and Computer Science Department — will

pursue a Ph.D. in chemistry at the renowned University of Cambridge. Established by the Bill and Melinda Gates Foundation, the highly competitive scholarship is akin to Oxford's Rhodes scholarship, or the Marshall, which also supports study in the United Kingdom.

At Cambridge, she will gain further experience in small molecule drug design and synthesis. "My goal," she said, "is to be a research chemist affiliated with a major research

university working on developing molecular therapies for treatment of diseases affecting people around the world."

Kunciw will study under Dr. David Spring of the Chemistry Department and will be a member of the 600+ year old Gonville and Caius College. Among its notable fellows are physicist Stephen Hawking. Twelve Nobel Prize winners also are graduates, including Francis Crick, who co-discovered the structure of DNA.



## STUDENT RESEARCH SPOTLIGHT



*Dominique Kunciw with some of her greatest supporters: (from top) Dr. Kristen Walton, SU's national fellowships advisor, who mentors and guides high-caliber SU students through the application process for such awards; her parents; and Bruce Cort, SU Foundation, Inc. board member, whose Cort Scholarship in Chemistry helped fund her education.*



### **Inspiration in the Dung**

Mallory Hagadorn's fieldwork on an organic farm near Federalsburg last summer turned out to be the inspiration for an expanded project that has earned her a National Science Foundation Graduate Research Fellowship valued at \$126,000 to further study dung beetles on farms across Maryland. Her three-year grant provides \$30,000 in annual research stipends and covers tuition for her M.S. in applied biology from SU.

Working with Dr. Dana Price, a faculty member in SU's Biological Science Department, and Dr. Anne Estes of the University of Maryland Medical School's Institute of Genome Sciences, Hagadorn is identifying and comparing populations of dung beetles on organic versus conventionally managed pastures.

"Dung beetles play a crucial role in ecosystems," Hagadorn explained, citing their ability to rapidly bury and remove animal waste, thus reducing pests attracted to it; aerate soil and cycle nutrients; and help maintain an overall natural balance.

Combining ecology with her growing interest in population genetics, Hagadorn's project also includes DNA sequencing for the microorganisms that live symbiotically in the beetles' guts. She wants to provide a further understanding of how they influence the functions and the distribution of the species.



### **A Congressional Presentation**

Sharing research on robotic arms, Samim Manizade presented at Posters on the Hill, a national event attended by U.S. Congressional leaders and others. Selected by the Council on Undergraduate Research from among some 800 applicants nationwide, Manizade was one of only 60 student participants and the sole representative of a Maryland campus.

A physics/pre-engineering major, Manizade explored the "Computational Modeling of Robotic Arm Kinematics." His project modeled a variety of arms with a computer-algebra system and used mathematical techniques to show their uses and applications in the field of electrical engineering.

Manizade was funded by SU's Bridges to SUCCESS program, which is made possible by a nearly \$1 million National Science Foundation grant dedicated to supporting the recruitment and retention of students in science, technology, engineering and mathematics (STEM) disciplines. He hopes to continue exploring robotics at SU.

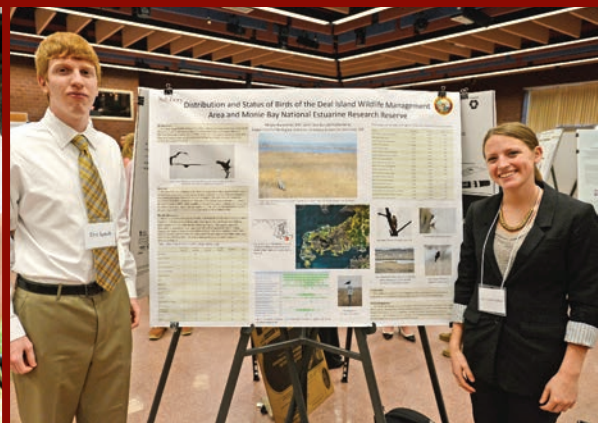
"I had the most fun talking to the other undergraduate researchers," Manizade said, describing some of their projects, including bio-concrete. He also appreciated experiencing such an interesting "environment of development."

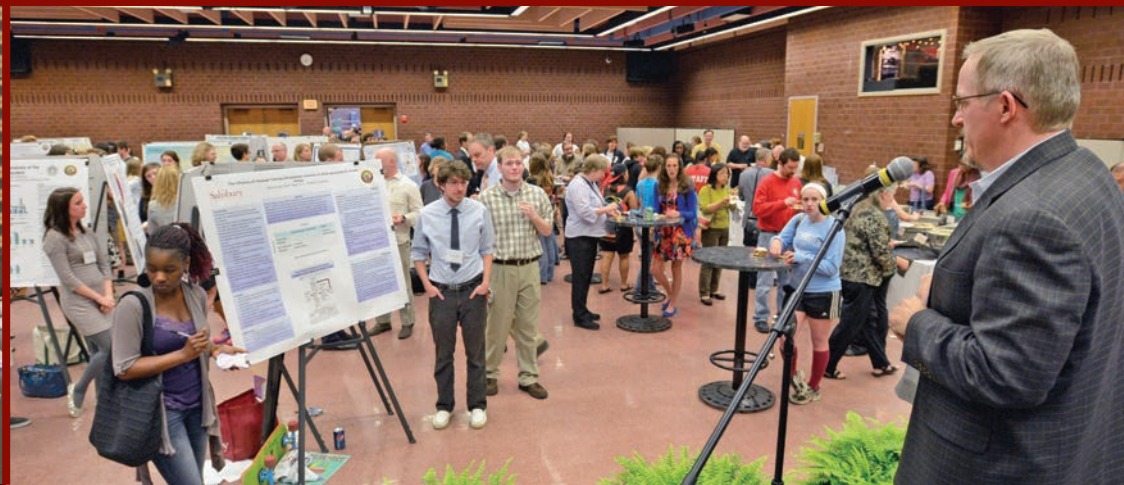
Beyond his academic research, Manizade has been appointed Student Regent for the University System of Maryland's Board of Regents for the upcoming academic year. ❖

# SUSRC 2013

SALISBURY UNIVERSITY  
STUDENT RESEARCH  
CONFERENCE

Nearly 200 undergraduate and graduate students participated in the 12th annual Salisbury University Student Research Conference (SUSRC), held on Friday, April 26. Sustainability and technology were important at this year's event as presenters and attendees used electronic programs or mobile apps to find sessions, and #SUSRC was trending as "Tweeters" could follow events on their Twitter accounts. In addition to celebrating students, SU recognized several faculty for their efforts. This year, Dr. Ryan Taylor (opposite page, top, far right) was recognized as the overall Outstanding Research Mentor for his contributions to furthering student research at SU.





**National Conference on Undergraduate Research  
University of Wisconsin • La Crosse**

*Salisbury University takes research seriously! Just ask the young researchers who attended the National Conference of Undergraduate Research (NCUR) in La Crosse, WI. This year, nearly 400 universities and colleges attended NCUR to promote and celebrate undergraduate research in all fields of study. With a contingency of 30 students, SU was the most represented university from Maryland . . . but it was not an easy trip. Experiencing breakdowns, treacherous weather, delayed (and later canceled) flights and lost luggage for nearly half the SU students, it took the group nearly 24 hours to reach La Crosse! Faced with the adversity of little sleep and borrowed clothes, the students shined. Armed with their presentation, poster or artwork, SU students did an amazing job presenting their research to faculty and fellow peers from across the United States and world. Though weather may have dampened the event, it did little to dampen the spirits and camaraderie of our students. They are fine examples of the caliber of students we enjoy at Salisbury University and our dedication to education through research.*



## Graduate Studies at Salisbury University



### MASTER'S PROGRAMS

- Applied Biology (M.S.)
- Applied Health Physiology (M.S.)
- Business Administration (M.B.A.)
- Conflict Analysis and Dispute Resolution (M.A.)
- Education (M.Ed.)
- Educational Leadership (M.Ed.)
- English (M.A.)
- Geographic Information Systems Management (M.S.)
- History (M.A.)
- Mathematics Education (M.S.M.E.)
- Nursing (M.S.)
- Reading Specialist (M.Ed.)
- Social Work (M.S.W.)
- Teaching (M.A.T.)

### CERTIFICATES

- Health Care Management
- Teaching and Learning with Technology
- Teaching English to Speakers of Other Languages (TESOL)

### DOCTORAL PROGRAM

- Doctor of Nursing Practice (D.N.P.)