Research at Salisbury University 2022 Edition A Lifelong Journey of Learning SU's Expert Faculty Envision the Future



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On the Cover: Dr. Jennifer Nyland mentors graduate student Jessica Strange on her thesis research. Nyland is just one of the many faculty at SU who are sharing their professional excellence with students in the classroom and in the lab. • page 4

Correction: In the 2021 issue of Re: Search, the incorrect photo was used for Dr. Ying Wu. The publication organizers offer their apology for this error.

Please Note: Social distancing and mask wearing are absent in some photos, as they are reflective of COVID-19 policies at the time they were taken.

"... SU faculty remain active in internationally recognized research programs."





Things may not be normal ... but we never stopped moving forward! Salisbury University's roots are as a Normal School, or teacher education institution. In fact, many colleges in the U.S. were established as Normal Schools in the 19th and early 20th centuries. Since that time, many of these campuses have become public comprehensive or research universities while proudly continuing their role in preparing the education workforce.

Perhaps you've wondered "Why are they called Normal Schools?" Not surprisingly, these campuses taught teacher candidates the norms of education, but Normal School derives from when these types of institutions were first founded in France in the late 1600s. The phrase *ecole normale* referred not just to teaching norms, but that these institutions should be a **model for all others**. Salisbury University carries on this tradition of excellence with students actively engaged in their learning, faculty among the 'best of the best' and talented staff supporting the entire enterprise.

This volume of *Re:Search* magazine has ample evidence of how SU is a model of research excellence despite the impacts of the pandemic. Whether applied research on vaccination rates in Africa or basic research on animal communication, SU faculty remain active in internationally recognized research programs. Undergraduate and graduate students continue to engage in authentic research experiences ranging from emerging computational applications to digital humanities to the impact of diabetes on vertebral development. Faculty also directly connect their students to professional research communities by supporting their engagement in national research conferences, publishing in refereed journals and mentoring them in the production of SU's undergraduate research journal, *Laridae*.

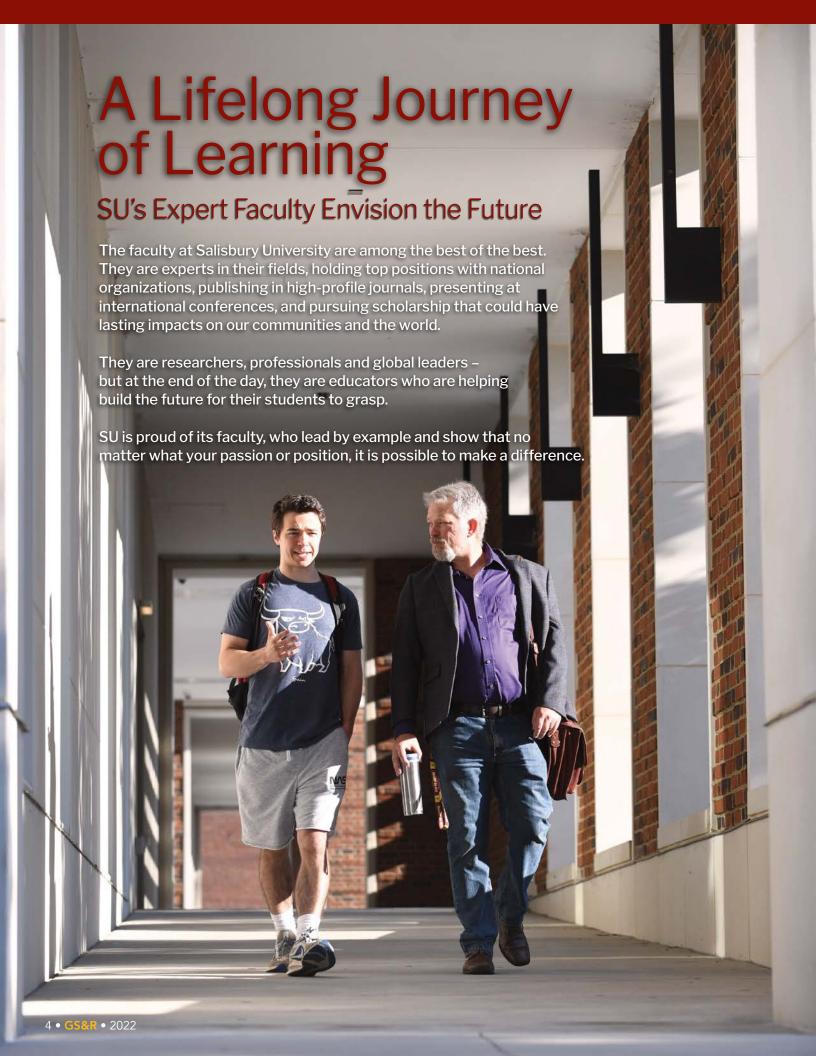
Although the pandemic could have shuttered our performing and fine arts programming, SU again served as a model for all others through its use of virtual and socially distanced performances and gallery shows. Arts faculty remained active in research on topics ranging from physical dramaturgy to queer identity.

Research is critical to our University mission, not only as a means to generate new knowledge but also as one of the most effective tools to support our students' disciplinary expertise and critical thinking, analysis, teamwork and communication skills. In fact, SU invested more than \$10 million in the research enterprise last year. This funding, the largest in our history, came from external grant awards, reallocation of internal dollars and the generous support donors through the SU Foundation. We hope you enjoy this issue of *Re:Search* and learning about the exciting and important research endeavors of our faculty and students.

Sincerely

Charles A. Wight President Karen Olmstead

Provost and Senior Vice President of Academic Affairs



Perdue School of Business

Defending the Value of Learning

Dr. David Emerson Associate Professor / Accounting

Although David Emerson wasn't always a professor, he has led a lifelong journey of learning.

After serving in the U.S. Navv. he spent 20 years as a major shareholder of a manufacturing firm, all the while continuing to earn college credits. Now he holds an M.B.A. and a Ph.D., and he is able to pursue his dream career in academia.

It's no surprise that assuring the academic success of his students is core to his values as a professor as well.

Alongside Accounting and Legal Services Department Chair Dr. Kenneth Smith, Emerson has been researching academic misconduct. Most importantly. their work aims to understand why students cheat and how to prevent them from doing so.

"Cheating is not a victimless crime," Emerson said. "It hurts many different parties, first and foremost the students themselves."

The most recent direction their

research has taken investigates how an individual's personality interacts with the elements of the fraud diamond capability, opportunity, motivation and rationalization - to determine which traits play a part in the decision to engage in online academic assistance websites, which provide access to test banks and homework solutions.

Emerson explained that one student's decision to cheat can have far-reaching effects. It hurts the student themselves by circumventing the learning process. Other students in the class who work hard and are harmed by inflated grades may also feel motivated to cheat just to keep up with their classmates.

On a higher level, cheating hurts the institution as well. SU is one of the top 20 accounting programs in the nation and highly recruited by major employers. Students who are successful in the program are almost certain to have a good job upon graduation. However, if there are students getting through the program based on their ability to access all the answers to their class material online, it hurts the reputation of the University and may prevent future students from getting hired.

"I was distressed to discover how widespread the use of these websites was," Emerson said. "As professors, we



Published in the December 2021 edition of the Journal of Accounting Education, his co-authored paper, "Online Cheating at the Intersection of the Dark Triad and Fraud Diamond," was named the "Best, Most Important Research in 2021" by The Cheat Sheet, a weekly newsletter on research and developments related to academic misconduct. Emerson also appeared as one of the featured guests on The Score, a podcast devoted to exploring issues of academic integrity.

"I'm learning that as a professor one of the best things I can do is motivate my students in the classroom to learn the





Striving for Better Outcomes for All

Dr. Dustin Chambers Professor / Economics

One of the most rewarding things about working in economics is the opportunity to make things better.

At its core, that's what Dr. Dustin Chambers' work is all about.

Chambers is an applied econometrician who has published widely on the topics of income inequality, poverty and economic growth. He has published 28 papers in highprofile journals such as *Regulation & Governance*, and he has earned nearly 1,000 citations for his research. His early work was in cross-country studies, but recently he has pivoted more toward the



effects of U.S. government regulations. Sometimes, these regulations can have an unintended impact on consumer prices, entrepreneurship and income inequality.

His background in studying international economies has given him perspective about how conditions may be improved in the U.S. For example, the Canadian logging industry was once strictly regulated, down to the type of nails that had to be used in bridges. Later, more broad regulations simply stated that companies must maintain the safety of their workers and equipment. Rather than micromanaging, these regulations were based on outcomes, putting more pressure on industries to take responsibility for the safety of their workers. As a result, the industry was able to reduce fatalities and injuries by about 16%.

"I think regulations are really important, but at the same time I want to see humans flourishing and achieving their full potential," Chambers said. "We want more regulations that protect workers, protect the economy and help people pursue opportunities to the most effective extent possible."

Chambers' research has great relevance on the national level. President Joe Biden has stated that one of his goals is to review pending regulations and their unintended consequences before they go out the door. Last year, Chambers published a paper he co-authored on the

Regulation & Governance

effect of federal regulations on statelevel mortality rates in the journal Risk Analysis, which receives attention from policy makers.

In addition to presenting at academic conferences, Chambers speaks with state senators and representatives about the issues he researches. Last year, he spoke with lawmakers from 18 different states and four governor's offices. He also has testified before the U.S. Senate about the impact of regulations on the economy.

Such connections are one reason why SU graduates often do well in government jobs. Chambers has taught courses where he has recommended students apply for internship positions at policy think tanks and learn more about political economy. He said his engagement in his field is key to motivating students to find their own ways to engage with the world and pursue opportunities such as internship programs and graduate school.

"I hope my work has an impact on people and policy moving forward," Chambers said. "There are a lot of winwin possibilities out there."

Solving Real-World Problems

Dr. Jonathan Munemo Professor / Economics

As a professor and scholar, Dr. Jonathan Munemo confronts the world with a practical mindset.

When teaching his students, he shows them the real-world effects of what they're learning. When preparing materials for class, he is always thinking about how the topics apply to current issues in the world. And when he sees a problem, he finds a way to fix it.

Munemo's professional background is in international trade, development finance, business regulations and entrepreneurship. His research papers have been published in leading peerreviewed journals including International Review of Economics and Finance, Small Business Economics, Regulation & Governance, among others.

When looking at the COVID-19 pandemic, he was deeply troubled by the low vaccination rate in African countries. In the U.S. and many other advanced economies, well over 60% of the population is now fully vaccinated. But in Africa, just 12% of the continent's 1.3 billion people is fully inoculated.

He spoke about these concerns with colleague Eugene Bempong Nyantakyi, chief research economist for the African Development Bank Group, and they agreed that something must be done.

Together, they co-authored the article "Going the Last Mile," which

Safeguarding
the World's Health and Well-being

was published in the December 2021 edition of *Finance & Development*, the International Monetary Fund's (IMF's) flagship magazine. The article called on the IMF and international community to address constraints for effective mass COVID-19 vaccinations in Africa, including challenges of infrastructure and transportation of vaccines.

"Supply of course is an issue, but it doesn't matter whether the vaccines are being shipped from U.S. or Germany; if the logistical infrastructure to deliver the vaccines to the people is not in place, you can't solve the rest of the problem, 'the last mile,'" Munemo said.

This is a crucial issue close to Munemo's heart. He said he needed to make sure it was highlighted in a prestigious and high-profile publication like the IMF's Finance & Development, which is read globally by top policy makers, academics, practitioners and other decision makers.

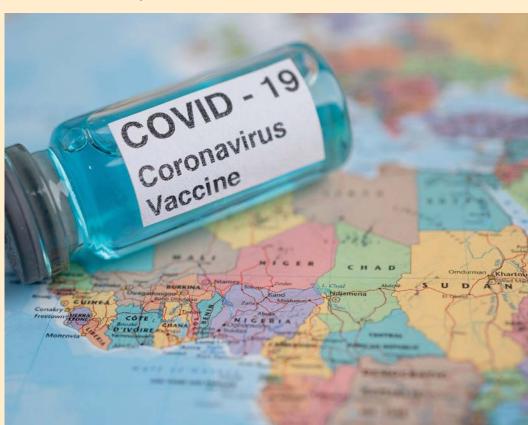
The results have been encouraging. The study has been picked up by news outlets around the world including Bloomberg, the Straits Times, Japan Times and the Conversation, and there have been pledges to substantially ramp up vaccine supplies to Africa as well as address gaps in infrastructure to drive a strong logistics performance.

This kind of work is important for the



world as we grapple with how to recover from a global pandemic, but it is also important for SU as an institution and for its students. Munemo says his research and his teaching inform each other. He often draws on his research to show his students the real-world applications of what they are learning in class – which can also inspire and encourage students to pursue research of their own.

"I always tell my students that we need good policymakers," Munemo said. "I want them to take the data application techniques that we learn in class and use them to go out, make better policies and do some good in the world. Hopefully, the next generation of policymakers will give us better policies to improve the country and world. As educators, that's our goal."



Fulton School of Liberal Arts

Arriving on the International Scene

Dr. Elsie Walker – Professor / English Dr. Ryan Conrath – Assistant Professor / English

One of the key ways we make sense of the world and our lived experiences is by telling stories.

Whether it's classic works of literature like Shakespeare, genres like mystery or romance, or franchises like Marvel's superheroes, there are some stories people want to see told over and over. As those stories are retold through different lenses over time, they take on new forms and meanings.

Dr. Elsie Walker, professor of cinema studies at SU and editor-in-chief of *Literature/Film Quarterly (LFQ)*, said this is what is so exciting and important about the study of adaptation.

"Adaptation can cross cultural borders and speak to various audiences," Walker said. "Because of this, I think the journal can speak to potentially anybody."

LFQ is the longest-running academic publication devoted to the study of adaptation, and it is housed right at SU. Since it was founded in 1973, the journal has been a global stage for scholarly discussion on a network of ideas related

to literature and film, including culture, politics, history and economics. It has featured interviews with some of the most important directors in cinema, and its print publication had subscriptions in more than 30 countries.

In 2016, Walker oversaw the journal's transition to an online and open access model, putting SU on the international map as it joined a global effort toward democratization of scholarship. She said many people who apply to SU from other countries have heard of the journal. In fact, knowing the journal was housed at SU is what led Walker herself to apply.

"I think it's good for students to understand that this journal is based entirely at SU," Walker said. "The work we're doing right here is an important beacon for other scholars."

Not only does the journal have international eminence, it is also a valuable resource for SU students. Because of her expertise editing *LFQ*, Walker was approached by the group of students who started the *Laridae* undergraduate research journal for advice.

Both Walker and Dr. Ryan Conrath, assistant editor of the journal, routinely share behind-the-scenes information with their students about putting together a publication, what the

submission process looks like, what they look for as editors and how to build relationships with other professionals. This information can be useful for any student who wants to publish their work and make career connections, whether it's at SU or elsewhere. In addition, the journal also helps inform the curriculum of film studies at SU.

"Undoubtedly the journal has changed the way I think about and teach film," Conrath said. "I now have this repertoire of knowledge I can bring in and cite in my classes, which keeps things fresh and exciting. It's incredible that we're housing these international conversations and at the same time providing such valuable resources to our students."

For more information and journal content since 2017, visit: **lfq.salisbury.edu**

LFQ Literature/Film Quarterly





Connections that Stand the Test of Time

Dr. Belen Vicens Saiz Assistant Professor / History

As assistant professor of history at SU, a lot of Dr. Belen Vicens Saiz' work involves drawing connections – not just between the past and the present, but between her students and opportunity, and between the University, community and world.

Vicens is a historian of law and society in medieval Spain and the Mediterranean world who is involved in professional organizations such as the Medieval Academy of America (MAA) – the largest organization in the U.S. promoting the field of medieval studies.

For Vicens, the Middle Ages is a time period of mystery and fascination.

"There is a legacy of thinking of the Middle Ages as the opposite of our 'civilized, structured societies' of today," Vicens said. "But it's also the site where we project our ideals of loyalty, courage and upholding what you believe in."

Vicens works with the programming committee for the MAA's 2023 Annual Meeting, which puts her in an ideal position to advocate for educational opportunities for SU students. Currently, the conference does not accept

presentations by undergraduates or master's students. However, one of Vicens' priorities as a member of the committee has been to push for more relevance for SU's undergraduate students. She has helped propose special sessions on how to study and interpret medieval manuscripts which will be of interest to students.

She hopes that in the future, she can take her students to the conference to attend panels, meet faculty in graduate programs at other institutions and get in touch with history by studying medieval texts up close.

"Studying a medieval manuscript is a life-changing experience for students," Vicens said. "It's one of the most important moments in their education because it makes what they're studying more tangible and real. It makes history come alive."

Through Vicens, SU has a national presence in the discipline (see page 27) – and it also shows colleagues at major research universities the importance of the work being done at SU.

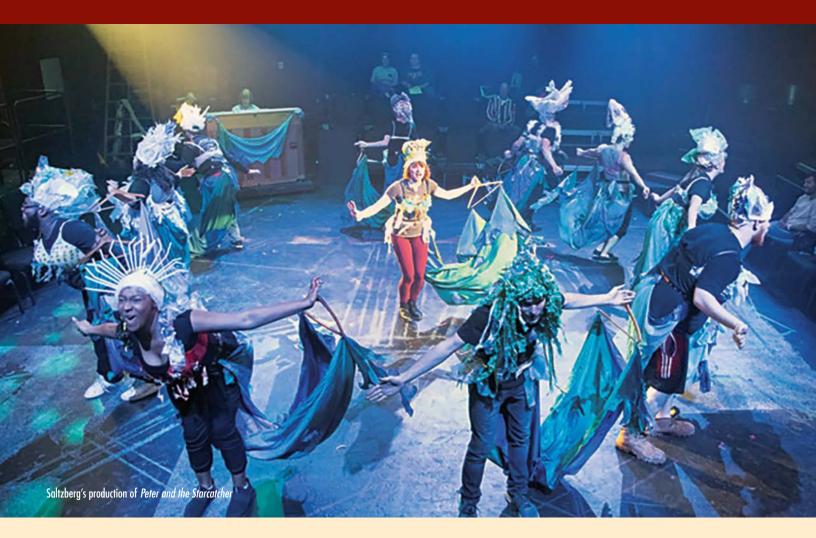
"In a smaller university like ours, we keep our research agenda, but we're also invested in teaching our students and in reaching out to our communities to explain the events they see on social media and in the news."

Vicens gave the Notre Dame Cathedral fire and Charlottesville demonstrations as examples. She said when we are surrounded by the manipulation of history, it is crucial to have an awareness that allows us to think critically about important issues, including those of race and equality.

"If there's one thing I want to leave with my students, it's that it's important to study history not just for what happened, but for what it means to us today," she said.



THE MEDIEVAL
ACADEMY OF AMERICA



Moving in the Right Direction

Dr. Matt Saltzberg Assistant Professor / Theatre

With the word "research," thoughts of science, technology and lab coats may come to mind. Students in liberal arts disciplines may not even consider research or scholarly activity a possibility for them. But Dr. Matt Saltzberg, assistant professor of theatre at SU, proves the value of developing scholarship, no matter what one's interests may be.





"One of my favorite moments I have with students is when I lead them through a physical theatre exercise," Saltzberg said. "Then I tell them, 'I hope you realize you just did research."

Saltzberg approaches theatre from a physical or movement-based aesthetic and is interested in embodied research practices. He is involved with the Association of Theatre in Higher Education (ATHE) and is vice president of the Association of Theatre Movement Educators (ATME). His scholarly work has been published in books such as Physical Dramaturgy: Perspectives from the Field and journals with international scope such as Stanislavski Studies, and he has been accepted to present at international conferences. He also earned awards including a Broadway World St. Louis Regional Award for Best Direction of a Drama.

As part of ATME, one of his agendas has been to encourage theatre professionals to write about their practice. This way, their work becomes part of an archive so their knowledge isn't lost and can be shared. Part of his vision is to start a digital scholarly

journal, which could include video of a professional's work that would hold the same academic weight as a written article.

For Saltzberg, his active involvement in his profession and dedication to his practice is equally important as his teaching. In addition to teaching courses in performance, acting and theatre history, he also directs productions as part of SU's main-stage theatre season.

"If I'm going to teach my students how to be artists, I have to be an artist," Saltzberg said. "How I work professionally is not that different than how I work with my students. If I want to see them succeed, it would almost be disrespectful not to hold them to that standard."

For Saltzberg, this all comes to life on the stage.

"In the end, we are artisans who are making something," Saltzberg said. "It's so enlivening to create something to the end of engaging an audience in a dialogue. It's no accident that theatre and democracy formed in the same historical moment. There's something so meaningful about that."

Always Looking Forward

Dr. Vinita Agarwal Associate Professor / Communication

As a scholar, professional and professor, much of Dr. Vinita Agarwal's work is about empowerment.

In her research, she examines how complementary and alternative medicine (CAM) approaches can help patients living with chronic pain to achieve a sense of agency in their care. Through leadership roles with communication organizations, she is guiding the conversation surrounding national issues. In the classroom, her engagement in the field gives her the oversight to help her students make their careers take shape.

"The potential to make a positive impact through my scholarship is very gratifying," said Agarwal, associate professor of communication at SU. "The ability to get a bird's eye view of how health communication issues play out globally enriches my classroom and helps me contribute toward increasing diverse understandings of meanings of health and wellness."

Along with being published in some of the top health communication journals, Agarwal has presented more than



50 competitively selected papers at national and international conferences. She is involved with the National Communication Association (NCA) – the largest national association in the discipline – and has held three leadership positions in the organization, such as her role serving as a member of the Executive Committee.

"Because NCA is the largest association in the U.S., my involvement brings great exposure for SU, which supported my research and helped me expand my interests in the direction of complementary and integrative health practices, therapeutic relationships, and patient-provider communication," Agarwal said. "I hope the international dimensions and visibility of my work furthers SU's commitment to cultivating

an environment of international excellence."

Having these connections puts Agarwal in touch with matters of importance at the national level. She has been a part of national conversations about how pedagogy is changing in the post-pandemic era and how communication as a discipline can contribute to addressing current issues.

This, in turn, enriches what she brings into the classroom at SU. For example, the health communication courses she teaches have significant community collaboration components that benefit her students as well as the University and greater community.

"My professional experiences have helped me relate course content with a greater degree of immediacy to my students, so they understand how their interests in communication and public relations can play a part moving forward," Agarwal said. "I would like my students to feel that they are on a lifelong journey of learning, and I hope they give back as much as they gain from the world around them."





College of Health and Human Services

Leading the Way into the Future

Dr. Brandye Nobiling Associate Professor and Program Director / Public Health

For faculty in SU's College of Health and Human Services (CHHS), there is a direct line between their professional engagement and the future of health care.

All across the college's three schools, faculty are actively involved in their fields, attending national conferences, conducting research, and presenting and publishing their work. As professors, many stress the importance of staying relevant in their fields because it ensures their students receive the most up-to-date and accurate information that will propel them into their careers.

"Health care changes all the time," said Dr. Brandye Nobiling, director of SU's Public Health Program. "We are always thinking about how to better meet the needs of our students as well as the needs of the workforce."

When it comes to her professional work, Nobiling has her hands full. She is involved with the Society for Public Health Education (SOPHE) and Eta Sigma Gamma (ESG) honor society for health education; is nationally certified through the American Association of

Sexuality Educators, Counselors and Therapists (AASECT); and led SU's Public Health Program to receive accreditation through the Council on Education for Public Health (CEPH).

This may seem like "alphabet soup" to those outside of the field; however, the effects are far-reaching.

Because of her national presence, Nobiling was one of six people appointed by SOPHE to an elite group of health education professionals to revise its teacher preparation standards for undergraduate programs, an effort that led to her receiving a SOPHE Presidential Citation in 2019. These standards are required readings in teacher education and physical education programs across the country.

Nobiling's involvement with SOPHE also has a direct effect on SU students. Starting in 2017, she began bringing a group of students in SU's Epsilon Xi chapter to the national ESG convention, where they have won awards from SOPHE consecutively each year. With SOPHE being the leading public health education organization in the nation, this is a major honor that proves SU's reputation for excellence in public health and health education.

As a leader at SU and nationally in her field, Nobiling is a point of contact for health education. Having the oversight she does ensures the information and

experience SU students receive are the most current and relevant.

"These changes in curriculum and accreditation may seem like technicalities, but it helps me guide not only my courses for my students but also the program at SU," Nobiling said. "I can talk to professionals at TidalHealth, and they will give me ideas about how to incorporate what is important and relevant to real sites right now. With that gold seal, students who come here know they're getting the best quality education possible."









Seeing the Best of Both Worlds

Dr. Christina Camillo Clinical Coordinator and Assistant Professor / Medical Laboratory Science

When it comes to career opportunities for students of SU's Medical Laboratory Science (MLS) Program, the possibilities are about as numerous as there are fish in the sea.

Dr. Christina Camillo '01, Ed.D.'19, clinical coordinator and assistant professor of MLS and a graduate of the program herself, can attest to that. After doing her senior paper on seal cell research and completing an internship at the National Aquarium in Baltimore, MD, she was offered a job and continued to work for the aquarium's lab for six years. Now, she is the resident expert for any student who wishes to explore their opportunities in the program and pursue veterinary medicine.

"It's important for students to know there are other options," Camillo said. "They don't just have to work in a hospital."

Camillo worked for the National Aquarium before returning to Salisbury to work for TidalHealth and teach at SU. Her research background ranges from nurse shark immunology, transfusion medicine and blood banking, to disciplinary literacy practices of MLS. She said the similarities between medical laboratory testing in animals and humans is surprising, and her MLS education at SU prepared her well for both sides.

Because of the skills SU's MLS
Program teaches, students who are
interested in working with animals have
a number of career paths available to
them. They could go into research and
wildlife rehab, or work in laboratories
at zoos and aquariums as Camillo
did. For example, SeaWorld hires
medical laboratory scientists and other
positions where it is important to have
a background in research and medical
laboratory operations. The San Diego
Zoo, the most-visited zoo in the U.S., also
employs lab professionals.

"Our students can bring their lab experience into these niche professions because a lot of the skills we teach are highly valued in lab and research settings," Camillo said. "It's exciting that's the case."

In addition to having a diverse professional background, Camillo remains actively engaged in her field. She has been a member of the Association of Zoo Veterinary Technicians (AZVT) since 2002 and previously served as editor-inchief and co-chair of the organization's annual conference program. After dedicating nearly two decades of service to human and animal laboratory science and the support of related research, she recently was honored with the AZVT's Lifetime Achievement Award.

She said her professional and scholarly work often crosses over into her teaching, not only because she can offer advice to her students about animal studies but because she can teach them important research tools like putting together proposals and writing, editing, citing and presenting.

"I think the animal side of things can be very challenging, but there's a reason these people are so passionate about what they do," Camillo said. "It's exciting that I'm able to pass that on to my students."

Henson School of Science and Technology

Giving Voice to Global Issues

Dr. Fulbert Namwamba Professor / Environmental Studies and Geography

Several years ago, Dr. Fulbert Namwamba joined members of SU's Geography Department on a trip to Tanzania. While the group was out to dinner, Namwamba's name was announced over the speakers. Everyone around them stood up and applauded.

Overseas, Namwamba's face is well-known. He has spent about 15 years appearing as a Swahili commentator for the BBC and six years for Voice of America Swahili Service, which broadcasts to six countries in Africa and several pockets of Swahili-speaking communities in West and Southern Africa, the Middle East and Asia.

Even so, at the time, he was shocked. "I realized that I am an ambassador of SU out there," he said.

A Kenya native, Namwamba is fluent in Swahili. He also has a professional background as a geologist, geographer and environmentalist. When Voice of America Swahili Service was looking for a scientific commentator to cover a volcanic explosion six years ago, they were put in contact with Namwamba. He has been the authority on matters such as geography and climate change ever since, and he now covers other topics including politics. He was the chief commentator during the Obama and Trump presidential elections. He does two to three interviews with Voice of America each week and still does interviews with BBC, as well as appearing as a panelist on Kenya Television Network, the leading TV network in the Republic of Kenya. Still, he says his primary role is as a professor.

"For me, being on TV and radio is like a big classroom where I do outreach of what I do at SU," Namwamba said. "When I share my interviews with my students, even though they don't understand Swahili, they get inspired to think globally."

Internationalization and global perspectives are key to Namwamba's teaching. In addition to sharing his experiences in the classroom, he has also taken his students on study abroad trips to East Africa. He was involved in the founding of the African Area Studies Program at SU and is on the Faculty Senate Cultural Diversity and Inclusion Committee. Looking ahead, he would like to introduce Swahili courses to the

When it comes to exposing students to diversity, he believes international engagement is one of the most important aspects.

"Some things our students see on TV and don't realize how it affects them," Namwamba said. "When events happen on campus that affect minority communities – whether they are people of color, women or LGBTQIA+ individuals – some students may not understand the impact because they have not been sensitized to diversity so they can react proactively."

For Namwamba, this effort starts in the classroom. When teaching classes that address energy and the environment, for example, he may look at the impact of petroleum pipelines on Native American reservations. What's important is that issues of diversity are built into the curriculum in a way that encourages students to be open-minded and start building a global mindset.

His methods have a very positive impact on his students, who have formed lasting relationships with peers in East Africa after taking study abroad classes with him and earned international jobs in Washington, DC.

"I realize that as soon as I engage my students and they love me for what I do in my teaching, they do not see color," Namwamba said. "Instead, they see that we are all human"





Helping Students Access Their Potential

Dr. Enyue Lu Professor / Computer Science

For Dr. Enyue Lu, professor of computer science at SU, one of the greatest rewards of teaching is helping students realize their potential.

That's why she is dedicated to integrating her research into the classroom, working alongside her students and allowing them to be coauthors and participants in projects that will prepare them for diverse career paths in computer science.

"SU has very talented students," Lu said. "Doing this kind of hands-on work and learning practical skills in a research setting is a great opportunity for them to explore the possibilities."

In 2012, the National Science
Foundation (NSF) selected SU as an
official Research Experiences for
Undergraduates (REU) site in the fields
of computer and information science
and engineering. Lu proposed the
project named "EXERCISE: Explore
Emerging Computing in Science and
Engineering" and has since

mentored students in the 10-week summer program as they delve into projects such as analyzing patterns across social networks, reconstructing medical images, increasing function speeds for geographic information systems, and strengthening computer and network security.

Becoming an REU site is highly competitive, and most are found at large research institutions. Despite this, SU has received funding for four REU sites since 2012, each running for three years. This designation is a testimony of the superior research opportunities undergraduates receive at SU. The REU site also recruits students from across the U.S., improving the University's national visibility as a program that has access to high-performance computing.

After completing the REU program, many students submit their projects to professional conferences such as the Association for Computing Machinery (ACM)/ Institute of Electrical and Electronics Engineers (IEEE) Supercomputing Conference and National Conference on Undergraduate Research. These opportunities are extremely competitive, but Lu's students have had great success in taking their projects forward to present at conferences, publish their work and enter graduate programs.

Most recently, computer science graduates Ian Thomas '21 and Michael Mandulak '21 were accepted into graduate programs



after researching network security anomalies and how to increase the efficiency of the Gale and Shapley algorithms of graphing.

Lu said that while SU is a teaching institution, it is equally important for her as a faculty member to be involved in scholarship and research. When her students receive the most current knowledge and experiences by working alongside her, it gives them an edge with the ever-changing technology they will use in their careers.

"Students get so much attention from the faculty here at SU, they are surprised what they can accomplish," Lu said. "We truly want to bring the best to our students."



Questions

Dr. Ryan Taylor Professor / Biological Sciences Dr. Kim Hunter Professor / Biological Sciences

If you asked Drs. Ryan Taylor and Kim Hunter about their research, they might point to a peacock.

Their research involves animal diversity and evolution - only instead of peacocks, they study túngara frogs.

"One of the mechanisms that drives evolution is female mate choice," Taylor said. "Because eggs are scarce and sperm are abundant, the few males that do mate put their genes into the next generation. It's females that are choosing which of those traits make it to the next generation."

If you take a look around at nature, frogs calling, crickets chirping, birds singing and the male peacock's colorful plumage all result from competition among males to attract a mate.

"All this work goes back to Darwin," Hunter said. "He was asking these big questions of evolution in biology. We've just amped up the game and made the questions more complicated, comparing what we can learn from the túngara frogs to other animal systems and even ourselves."

The biology professors' research takes them to Panama, where the male frogs congregate at ponds at night and start vocalizing to attract a mate. On any given night, the ratio may be 10-20 males for

the male frog's call and survey a sample of female frogs from the population to determine their preference.

Over the years, their research has grown more sophisticated, as they look at other factors that may influence a female frog's decision and how she detects signals from the male frogs in such a noisy environment. For example, they have a robotic frog with a silicone vocal sac that simulates the way a male frog's throat pouch inflates when it calls. Taylor describes this as being similar to humans lip reading at loud parties.

Although the overarching study deals with evolution and animal behavior, it intersects with genetics and biodiversity, cognitive processes, and technology. Their work can be applied to numerous other areas, including research on hearing deficits and hearing aids.

"This frog research is an amazing system to ask lots of important questions," Hunter said. "That's what I love about our research. It's bigger than any one person."

Taylor and Hunter's work has been published in top journals such as the American Association for the Advancement of Science. They have received multiple competitive grants from the National Science Foundation and are currently funded for around \$900,000. They have received attention from popular press such as The New York Times and BBC, and they have been invited to give talks all over the world. from Australia to Vienna.

Throughout their research, they have collaborated with professionals across the globe, including at the Smithsonian Tropical Research Institute in Panama. However, some of their most important collaborations happen right here at SU.

In addition to working with Henson technician Paul Clements, who designed technology for the project, including the current robotic frog model, the lab values collaboration with students of all backgrounds and interests. Art students have helped make frog models out of clay. Students with computer skills have helped with the sound files. Students interested in gaming have made 3D models of foam nests to take into the field using SU's MakerLab facilities.

"The amazing thing is that all of the work and technology is coming from SU," Taylor said. "Even though we're working with scientists at the Smithsonian and Research 1 universities, we're leading this work."

"No one person does the same thing in our lab," Hunter said. "That kind of collaboration is rare, and I think it's what makes us continue with this research and keep asking more important questions."



Seidel School of Education

Gaining Global Insights

Drs. Judi Franzak, Laurie Henry, Koomi Kim, Heather Porter and Thea Williamson Department of Literacy Studies

SU has proud roots as a teaching institution. Professors here are known for being mentors to their students, getting to know them on a personal level and encouraging them to see the possibilities for their future.

What's even more incredible is that they can merge their love for teaching with scholarly activity that rivals that of research institutions.

Faculty in SU's Seidel School of Education are a prime example of how dedication to teaching and professional excellence can align to bring out the best in their students and the University as a whole.

Through a competitive process, faculty in the Department of Literacy Studies were selected to host the editorship for the *Journal of Adolescent* and *Adult Literacy*, the premier journal in their field which is owned by the International Literacy Association (ILA). Dr. Judi Franzak acts as senior editor for the journal, with colleagues Drs. Laurie Henry, Koomi Kim, Heather Porter and Thea Williamson serving alongside her as

editors. Together, they work with about 200 other professionals on the editorial board and review hundreds of articles for the journal.

"The journal has a lot of importance to us as scholars and teachers," Franzak said. "We've written for the journal ourselves, and several of us have served on the editorial board before. It's helped us gain insight to help our students at SU, who are working in everyday educational contexts."

The journal covers topics that are being discussed in classrooms across the world, from understanding young students as writers, the culture around TikTok book talk, and even literature and cosplay in the Middle East.

Williamson said one of the most important insights the journal gives them that they can pass on to their students is how knowledge is produced in the scholarly world. For students finding their way in the field of education and for those pursing professional degrees, they find out how to transfer research into something accessible for audiences, how an article might turn into a policy recommendation or a requirement for their job, and how to choose books to teach in their classrooms.

"We use their articles often in our own classrooms to help our students in various contexts," Kim said. "They get to know about important issues, such as how teachers are working with linguistically and culturally diverse learners."

The group said that many of their students are amazed and very proud of the fact that SU hosts the journal's editorial team. Students in SU's master's programs tend to be members of the local affiliate of ILA. In this way, the journal provides them a connection to the larger organization for their professional lives.

It also brings national esteem to the University, as an institution that supports scholarly activity on this scale. Porter said this is an attractive reason why new scholars and young professors want to come work at SU and be part of the community.

"We're appreciative of the support from SU for these types of scholarly endeavors," Henry said. "This could not happen without strong institutional commitment to it."





Making Every Voice Heard

Dr. Shanetia Clark Associate Professor of Literacy, Chair / Early and Elementary Education

The moment you put a book in a child's hands is a special experience.

Stories have power. They can inspire a young person to reach for their dreams. They can give comfort for those struggling with something they don't know how to talk about. They can make a child feel accepted and loved for who they are.

A child can also feel lost and alienated when they don't see themselves in the narratives surrounding them.

"It is so important to have different types of books that speak to everyone in the classroom," said Shanetia Clark, chair of SU's Department of Early and Elementary Education. "I think there's a stigma that 'it's just a kid's book.' People don't understand all the messages and power that they hold."

Clark works with children's and young adult literature. She said when choosing



books to have in a classroom library or to teach to students, it's important to be very thoughtful and deliberate about what a child may take away from a book. These stories can help children begin to understand abstract ideas such as safety, peace, empathy and diversity. They also are one of their first entry points into the community of literacy, and that special experience is something she tries to impart upon students in her education courses at SU.

"I try to bring the joy back into reading so they can share that with their students," Clark said. "You want every student to feel present, seen, valued."

As the co-editor of *Voices from the*Middle, the National Council of English

middle level peer-reviewed journal, these are conversations that Clark engages with daily, both in her professional work and in the classroom. Reading the entries for the journal is an exciting experience for her because she gets to see the amazing work teachers are doing in their classrooms – even amidst challenges like a global pandemic – and think about how to pass that knowledge onto her own students.

She also has been on award committees such as Notable Children's Books for the Language Arts and the Jane Addams Children's Book Award for books that engage children in thinking about social justice and equity. She brings these books into her ELED 350 Literature for Children course so her students can experience, inspect and critique them. They are able to have conversations about books dealing with issues such as race, LGBTQIA+ and religion, and ask themselves what messages are being taught, who is absent and who is present.

"Let Black or Brown children see themselves as the hero," Clark said. "Let there be women scientists. Let there be books with different types of families. We need books that celebrate and give voice to what kids are experiencing." *





Over the course of the past two years, there has been a lot of change and activity for Salisbury University's faculty.

As mental health issues became a more visible concern and personal lives started to cross over into academic lives, SU faculty have gone above and beyond to take care of their students' needs. Many students were able to succeed in the conditions of a global pandemic because of the dedication of their professors.

Meanwhile, faculty have been facing many of the same struggles. They, too, have had to figure out how to take care of children as schools were closing, look after elderly parents, and protect their own health and well-being – all while adjusting their teaching methods, learning how to run an effective classroom virtually and ensuring the success of their students.

Now, SU faculty will have a new resource to turn to.

The Faculty Development Center aims to provide a 360-degree center to support the needs of faculty members, not only as instructors and scholars, but as people.

"Now more than ever, we need to look at the faculty member as a whole person," said Dr. Jessica Clark, assistant provost for faculty success and professor in biological sciences. "It's important we put our own oxygen masks on before we try to save those around us."

The Faculty Development Center is a place where faculty can come for professional development opportunities, personal wellness, time management strategies, and support in the classroom and in their scholarship. It will integrate some of the existing resources on campus, such as Instructional Design and Delivery, to provide a holistic center for faculty support. The center is soon to be named after a faculty vote.

Clark hopes the center will help faculty as they strive to align their personal and professional goals.

"A lot of us came to SU because we didn't want to give up one opportunity or another," Clark said. "We wanted to be in the classroom interacting with our students, staying current in our scholarship and still have a meaningful personal life. We have a unique population of faculty here at SU in that we are able to grow and nurture these different aspects of our lives."

Last summer, SU faculty had the opportunity to participate in a summer

writing program that drew from the National Center for Faculty Development and Diversity, where SU has an institutional membership. As part of the program, they were able to support each other in efforts to get articles published, submit grants and further their scholarship. Clark said what was special about the experience was that she got to see not only the remarkable work that SU faculty were producing but the community that they cultivated. She thinks that community is what has gotten them through the past two years.

"Everyone is so burned out that it's hard to get people to show up and add onto their list of things to do, but the remarkable thing is that SU faculty are still showing up in their scholarship," Clark said. "Every day I hear about an amazing publication that came out, a grant that was awarded or some other readout of the active engagement of our faculty. The commitment they continue to make to the growth and success of our students, but also that same commitment to one another — that's really the strength of SU's faculty." \[\displayers

Graduate Programs for Today and Tomorrow By Elizabeth Geiger '21

Since 1962, Salisbury University Graduate Programs have arown to 15 master's degrees, 2 doctoral programs, and several post-baccalaureate and post-master's certificates, meeting the challenges of our ever-changing world and job market. The SU graduate curriculum is designed to assist students, new professionals or those in established careers to agin greater mastery in their fields of interest, while also providing new ways of thinking, improving skills that are irreplaceable by technology and gaining new perspectives for today's dynamic work environments. The graduate degree and certificate programs are career-focused, while also based on developing the critical thinking and communication skills of the individual. Class size is limited to maintain a low student/faculty ratio that facilitates not only collaboration and participation, but also individualized attention and instruction.

Fulton School of Liberal Arts

The Fulton School is one of the largest and most diverse schools at SU with its discipline-based and interdisciplinary programs. The Department of Conflict Analysis and Dispute Resolution provides a Master of Arts to distinguished students who are driven to provide skilled conflict resolution locally, nationally or internationally. A partnership with SU's Bosserman Center for Conflict Resolution, recently designated as a United Nations Regional Center of Expertise, allows students to have practical experience in the field, alongside theoretical research methods. In March 2021, Intelligent named the master's program among the best in the nation.

The **English** Department's master's program provides students with three tracks to pursue: Rhetoric and Composition, Literature, and Teaching English to Speakers of Other Languages. The department has established a comprehensive program supporting students pursuing a variety of goals - earning a Ph.D., career advancement or entering the workforce.

The Master of Arts in **History** allows students to grow their research interests in many areas of U.S. and world history through one-on-one mentoring by diverse faculty, small class sizes and access to on-campus archival materials, housed in SU's Nabb Center, where students can research rare artifacts, books and manuscripts from as early as the 17th century. Recently, a history graduate student developed a Black History Walking Tour of Salisbury, which provides rich insight into the history of the Salisbury area and community (see page 26).

Henson School of Science and Technology

The Henson School provides an outstanding, studentcentered environment in which expert faculty empower students with knowledge and skills from science, mathematical and health-related disciplines. The Master of Science in Applied Biology allows students to perform laboratory research to gain valuable experience while focusing on the growing need of a technologically trained workforce. With collaborations with national organizations such as the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the Smithsonian, and the U.S. Fish and Wildlife Service, to local organizations like Maryland Coastal Bays and the Maryland Department of Natural Resources, SU's program prepares graduates for collaborative work within the biology disciplines.

The Department of Mathematical Sciences offers a Master of Science in Mathematics Education. This program is focused on those who would like to teach mathematics at a middle school or high school level. The program allows for flexibility that is important to our current educators, allowing full-time teachers to take one or two classes a year.

Also housed in the Henson School of Science and Technology is the Master of Science in Geographic **Information Systems Management** — now in its 15th year. The M.S. in GISM is a nationally ranked, fully online program that can be completed in 13 months (full time) or two years (part time) and is specifically designed for the advancement of GIS professionals.

College of Health and Human **Services**

The U.S. Bureau of Labor Statistics projects that the health care industry will add more jobs than any other industry in the coming years, and the School of Social Work and School of Nursing graduate programs are providing the skills and knowledge to the next generation of professionals.

SU's Master of Social Work is offered at five convenient locations throughout Maryland, as well as a fully online option. It provides students with flexibility by offering classes in a hybrid format, allowing working professionals to succeed within this program. The department is working diligently to approve two new specializations to the program, so as to offer their students the best outcomes in the field.



OPPORTUNITIES FOR PROFESSIONAL ADVANCEMENT AND PERSONAL ENRICHMENT



The School of **Nursing** offers a Master of Science in Nursing, Doctor of Nursing Practice, as well as certificates in health care management and family nurse practitioner (Post-D.N.P.). The Online M.S. in Nursing Program was named as one of the country's best by *U.S. News and World Report*. The school's graduate programs are preparing frontline health care workers with the skills to manage constantly changing health care needs in an efficient and collaborative way.

A Master of Science in **Health and Human Performance** prepares its graduates for a wide range of professional careers from clinical physiology to athletics to corporate wellness positions. Through internships in their area of practice, graduates are able to enter the health and human performance community ready to apply evidence-based best practices in the treatment of their patients.

Recent graduates have moved on to the Doctor of Physical Therapy Program at High Point University, employed by sports teams such as the Toronto Blue Jays and colleges such as Central Michigan University.

Perdue School of Business

Accredited, flexible and exceptional, the M.B.A. program prepares students and practicing managers with the skills to succeed as organizational leaders. The Master of **Business Administration**, accredited by the Association to Advance Collegiate Schools of Business, has been named by *U.S. News and World Report* as one of the top online M.B.A programs in the United States for the fifth year in a row. The program also launched a free online mini course, Experience the SU M.B.A., that helps potential applicants understand what to expect in and from SU's program.

Seidel School of Education

The Seidel School of Education is advancing the development of teaching leaders throughout the region through high quality master's programs addressing technology, an increasing diverse school population

and cutting-edge instructional strategies. The Master of the Arts in **Teaching** is a collaborative degree with the University of Maryland Eastern Shore, providing students a professional pathway to the initial teacher certification.

The Education Leadership Department is focused on the professional development of P-12 educators as well as higher education professionals through advanced degrees. Programs offered are: M.Ed. Curriculum and Instruction; M.Ed. Curriculum and Instruction — Higher Education Leadership Track; M.Ed. Educational Leadership; Post-Baccalaureate Certificate in Higher Education; Post-Master Certificate of Advanced Study in Educational Leadership; and Post-Master Certificate of Successful Completion in Educational Leadership.

The Literacy Studies Department has two graduate programs: the Doctor of Education: Literacy Studies and the Master of Education — Reading Specialist. These programs are committed to nurturing the next generation of educational professionals, who will address problems of literacy practice in diverse educational settings, spanning early education to post-secondary contexts. The Reading Specialist Program recently earned national recognition for the preparation for literacy professionals from the International Literacy Association.

The graduate programs offered by SU allow students and career professionals academic growth and career advancement tools and skills. With small classes and distinguished faculty members, the graduate studies programs are not only honing skills, but are enriching lives and changing communities.

Learn more and let SU help you make tomorrow yours: www.salisbury.edu/gradstudies

The support from the professors here at SU has been tremendous. Their guidance has helped build a foundation for me to excel and I look forward to the next steps in my career.

JEREMY GENCAVAGE

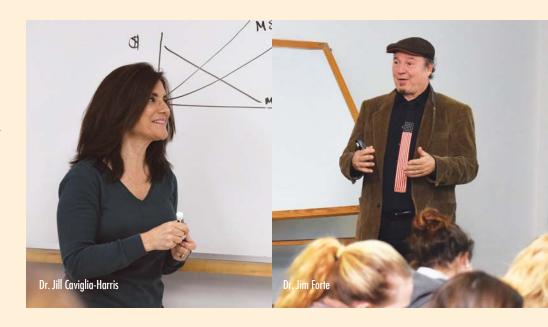
Master of Science in Geographic Information Systems Management

Connecting Excellence to the Classroom

As this issue of *Re:Search* explores the vast number and variety of activities and honors of Salisbury University's faculty, we asked five faculty members to make the connection between that excellence and classroom activity.



How does your work in your field contribute to faculty excellence at SU and in the classroom?



Dr. Jill Caviglia-Harris

Professor, Environmental Studies and Economics and Finance

My research is focused on understanding the underlying tradeoffs between development and deforestation in the Brazilian Amazon and identifying answers to complex questions concerning the degree to which the ecological costs of deforestation are offset by local gains from economic development. I have collected primary data from agricultural households in Rondonia, Brazil, about their use of land, rate of deforestation and overall wellbeing since 1996 to help answer these questions.

This long-term project has allowed me to collaborate with dozens of researchers across the globe and work with numerous undergraduate research assistants at SU, both in the field and in the "lab" helping them to gain research, data collection and data analysis skills that help them prepare for graduate school. I take the lessons from this work with me to the classroom every day I walk in to give a lecture. I update my class topics based on my research findings, better adjust to my student needs because of my work with undergraduates and have some pretty cool stories to tell due to these adventures.

Dr. Jim Forte

Professor, Social Work

I published my first article in 1988.
I have been busy since, with four books, 41 articles/chapters and 101 presentations. While conducting research and writing, I have engaged in a continual dialogue with my students at SU, both in the classroom and in my mind, asking questions like 'How will this knowledge be useful?' and 'How can I write in engaging ways?' Thanks to my students, who continually engage me.

Responding to an increase in the politically induced suffering of people and other species, I began a book on hazardous intersections three years ago. Informed by critical theories and pedagogy, my book-in-progress dialogues and provides learning activities to foster student transformation toward becoming caring, civically engaged, culturally responsive, evidence and theory-informed, justice oriented, reflective social workers.





Dr. Daniel Harris

Associate Professor and Chair, Geography and Geosciences

As a geographer, the application of mapping techniques in the real-world for research and other projects enables me to share those experiences with students in my classes. I believe that my examples, the stories behind my mapping activities and the exercises created for classes based on these data are far more valuable than what can be simply pulled from a textbook or lab manual. The "messiness" of working in the real-world can be shared, as can the techniques employed in quality control, to prepare our students for the realities they will encounter in their careers after graduation.

Field work is the primary reason I chose to become a geographer. Experiences collecting geographic data in the Brazilian Amazon, at SU and in other areas, enable me to share the application of the geographic techniques and technologies examined in class with SU students in an authentic way.

Dr. Alexander Pope IV

Associate Professor, Secondary and Physical Education

In general, my field of social studies education is interested in the ways that teachers, students and others use schools to ask and answer questions about their communities. My book (Becoming a Holocaust Educator: Purposeful Pedagogy Through Inquiry - see page 27), for instance, details how teachers from different states and grade levels approach and experience teaching the Holocaust in their specific communities. This is an outgrowth of my professional development through the Olga Lengyel Institute for Holocaust Studies and Human Rights, a group advocating the same sort of communitybased inquiry that social studies teacher groups have prioritized since before John Dewey wrote The School and Society.

I try to promote that community-based inquiry at SU through the Institute for Public Affairs and Civic Engagement (PACE). Among other things, we support and compensate those who would like to bring more of the community – people, spaces, experiences, issues and questions – into contact with elements of our campus, whether individual students, entire courses, special events or research projects. We sometimes call those "high-impact practices," and they can be approaches to excellent teaching.

Dr. Isabel Quintana Wulf

Assistant Professor, English

The study of literature is a vibrant field that is ever in flux, generating engaging intellectual conversations that keep scholars across the nation talking to each other. One of the most intellectually stimulating moments of the year for me is the Multi-Ethnic Literatures of the United States (MELUS) annual conference. It provides a space to think about literary texts in conversation with the exigencies of the times.

These insights directly influence not only my scholarship but also my teaching. Bringing the pressing conversations in the field to the classroom infuses my teaching with vitality and relevance. It helps students understand the value of literary study not as an exercise stuck in amber but as a practice attuned to the aesthetic, formal, social, political and historical forces that shape literary texts and the important conversations of which they are part. ❖

SU Represented at USM Center for Academic Innovation Faculty Showcase

The future of higher education is changing. Over the past two years, faculty across the globe had to engage in different teaching practices to meet students where they are. However, the future is looking a little brighter – some of those practices turned out to be a benefit.

Last fall, the University System of Maryland (USM) hosted its Kirwan Center for Academic Innovation Faculty Showcase. Seventeen Salisbury University faculty attended the showcase to present on teaching innovation and lessons learned during the COVID-19 pandemic.

"There is a silver lining," said Dr. Jessica Clark, assistant provost for faculty success and professor in biological sciences. "Our faculty took so many amazing things out of this situation, and we came together as a system to reflect on it. This really shows the remarkable dedication and brilliance of the faculty here at SU."

Locally, SU faculty discussed similar wins at the annual Teaching Learning Conference on February 18. Topics addressed included how to increase student engagement and equity in the classroom.

Faculty are also discussing successes that have continued despite the pandemic, such as the number of students submitting and receiving competitive fellowships like the Fulbright and Goldwater Scholarship. Research and scholarly activity among students are alive and well, and many students have presented at events such as the National Conference on Undergraduate Research and Posters on the Bay.

"The amazing thing is that our student success right now is also unbelievable, and that's a reflection of both the strength of our students and the faculty who guide them," Clark said. Participants and presentations in the Kirwan Center Showcase included:

- Dr. Carolina Bown (Communication):
 "Experiential Learning During COVID-19: Lessons Learned from Micro-Internships and Virtual Networking"
- Drs. Sarah Surak (Environmental Studies and Political Science) and María Fernanda Batista Lobo (La Universidad Latinoamericana de Ciencia y Tecnología, ULACIT): "Global Learning Without Leaving Your Seat: International Classroom Collaborations During COVID-19 and Beyond"
- Letha Moszer, the late Sue Park and Kathleen Arban (Social Work): "Pandemonium or Progress? Navigating Remote Learning During a Pandemic"
- Drs. Chrys Egan (Communication and Fulton School Associate Dean), Echo Leaver (Psychology), Paul Scovell (Communication) and Brittany Foutz (Conflict Analysis and Dispute Resolution): "Remote Teaching Specialists: Reimagining Liberal Arts Instruction During the Pandemic"
- Dr. Jennifer Cox (Communication):
 "Kollaborating" with Kahoot!
 Teaching Writing Using Quiz Apps"
- Drs. Alison Dewald, Cynthia Watson and Mindy Howard (Chemistry) and student Kayla Sealover: "At Home with Intermolecular Forces: A Remote Lab Module for Chemistry General Education Students"
- Drs. Joshua Sokoloski and Anita Brown (Chemistry): "Lab in the Time of COVID-19"
- Dr. Jim Fox (Education Leadership):
 "The Connective Power of Video Feedback and Video Messages"
- Dr. Mike Koval (Accounting and Legal Studies): "Using Video Storyboards to Prepare Students for Flipped Classroom Assignments" ❖































A Researcher at Heart

President Wight Supports the We Are SU Campaign with \$40,000 Dorothy Ruxton Chemistry Student Research Fund

Salisbury University President Charles Wight has always been a teacher and researcher at heart.

A professor of chemistry and an expert in chemical explosions, Wight dedicated decades of his academic career to teaching, research and administration at universities in Utah, before being named SU's ninth president in 2018.

The author or co-author of more than 170 academic papers, his own research interests have focused on physical chemistry, the chemistry of explosives and propellants, and the kinetics of solid state reactions and thermal analysis. Since arriving at SU, he has taught a general chemistry course every fall semester — and plans to continue doing so even after retiring from the presidency later in 2022.

Wight and his wife, Victoria Rasmussen, have provided generous philanthropic support for SU and its students, most notably creating a research fund for chemistry students.

Established in 2021, with gifts totaling \$40,000, the Dorothy Ruxton Chemistry Student Research Fund provides travel grants and professional development resources to allow SU chemistry students to present their research at conferences and network with established scientists in the field. The fund is named in memory of Wight's mother, who died in 2019.

"My mother was a staunch advocate of education — not just for her own children, but for all people," said Wight. "I can think of no better way to honor her legacy than to help expand educational opportunities for SU students."

"This generous gift provides benefits that could be life-changing for students," said Dr. Michael Scott, dean of SU's Richard A. Henson School of Science and Technology. "The professionals they meet at conferences and symposia could be a gateway to job interviews, invitations to participate in research teams, graduate school referrals and more."

In past years, most chemistry students who have presented at national conferences have had to pay their own way — a burden for some, according to Dr. Stephen Habay, SU Chemistry Department chair. But the Ruxton Fund can really eliminate that barrier, he added.

In addition to the Ruxton Fund, Wight and Rasmussen also have philanthropically supported SU students in numerous ways, including the Student Emergency Fund, Chemistry Department, Student Government Association, Food for the Flock, Multicultural Services and other causes.



Dorothy Ruxton: A Lifetime Committed to Education and Access: Earning a master's in psychology from Columbia University, Ruxton worked as a special needs teacher and administrator, opening the Wightwood School in Florida. In retirement, she served Orlando's Adult Literacy League, teaching others to read.



Beyond personal giving, support for SU also has been a major initiative of Wight's presidency. In 2019, the campus celebrated the launch of "We Are SU: The Campaign for Salisbury University," a \$75 million fundraising initiative that is the largest such effort in campus history. Under Wight's presidency, the SU Foundation, Inc., saw its endowment top \$100 million for the first time.

Research at SU is one of many areas the campaign aims to support. Undergraduate and graduate research has long been a pillar of an SU education, as students are able to work closely with dedicated faculty mentors across all disciplines.

In addition to building comprehensive support for research activities, other campaign priorities for the Office of Graduate Studies and Research include investing in new and existing grant, fellowship and scholarship programs for faculty, graduate students and undergraduates, as well as showcasing student excellence through enhanced opportunities to travel to national conferences.

*

To learn more about the We Are SU campaign and join Dr. Wight in supporting research at SU, visit: campaign.salisbury.edu

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A copy of the current financial statement of the Salisbury University Foundation, Inc. is available by writing 1308 Camden Avenue, Salisbury MD 21801 or on its website, www.salisbury.edu/foundation. Documents and information submitted under the Maryland Charitable Solicitations Act are available for the cost of postage and copies from the Maryland Secretary of State, State House, Annapolis MD 21401, 410-974-5534.



Salisbury University graduate history student Allison Stancil, a digital humanities intern for SU's Edward H. Nabb Research Center for Delmarva History and Culture last semester, has made it easier to trace the footsteps of the past with a walking tour highlighting Salisbury's Black history.

The tour is available free online at https:// theclio.com/tour/2090/l and can be downloaded for use on the walk without cell service.

While many of the buildings, homes and businesses that once were integral to the Black community are no longer standing, Stancil's tour takes participants to key areas and to important neighborhoods such as Georgetown, Cuba, California and Jersey.

Stancil, who grew up in Pocomoke City, MD, and has driven these streets hundreds of times, said she didn't know much about these areas before taking on the project. She believes many others may have similarly limited knowledge.

"I had no clue what I was getting into," she said. "I grew up in the area, and, for all intents and purposes, I've lived in the area, at times in Salisbury. I was pretty ignorant to most of the Black history of the area and most of the history in general.

"For example, I'd driven by the [Charles H.] Chipman [Cultural] Center hundreds of times, and I couldn't even recall seeing the building before. I had a feeling that's probably how many locals are."

The tour takes a real look at Black history of Salisbury, including the tragedies of lynching, segregation and "urban renewal."

The creation of the Church Street Mural,

by artist Paul Boyd III, and accompanying park; the preservation of the John Wesley Methodist Episcopal Church as the Charles H. Chipman Cultural Center; and other ongoing initiatives show the city's efforts to honor the legacy of its Black history and

While Stancil is happy with the outcome of her project, she believes it's just a small step toward ensuring that history is recognized and remembered.

"I think that my project is important, but I think we have to go back to the fact that I am white," she said. "This is a good start, but we need to have more projects, more publications even on the local sphere that put forth Black voices, Black stories. There are books that are being published, there are different community initiatives, but there needs to be more.

"I hope that local governments and foundations are willing to put in more work and resources to have more projects like this that are done by people of color and minorities because those are the most important projects."

While the walking tour is best experienced in person, Stancil's project also provides resources for those who may no longer be in the area or have never set foot in Salisbury.

"The walking aspect is nice. If you are local you can go and see the areas," she said. "That's why I took photos of each of the locations and posted them so there are these recent photos and you can see the older documents. It's also for those who can't do the walking tour. They can still learn about

Salisbury's history.'

The project required her to create something with the majority of the information coming from the Nabb Center's archives. While she didn't know much about the subject when she started, Stancil was happy with the amount of information available.

"I had access to all of the Nabb Center's digital archives, and it was amazing," she said. "Most of the documents in the walking tour are from the digital archives. Thankfully, the Nabb Center has a lot of information from local Black Salisburians. Hopefully people learn that the center has these resources and will examine what else the Nabb Center has in regards to Black history."

She also hopes even more members the public will entrust the Nabb Center with their history, whether that be stories, interviews or physical items.

"I hope the tour educates, but it's also a call to action so that hopefully more projects will be created about the area's Black history or other marginalized communities in the area," Stancil said. "It's also a way to let communities know that it's okay to entrust the Nabb Center with their records - that they are welcome and will be protected." ❖

The Nabb Center, in SU's Patricia R. Guerrieri Academic Commons, is a wealth of Delmarva history. Much of its archive is available digitally at www.salisbury.edu/NABB

RECENT FACULTY BOOKS

Handbook on Human Security, Borders and Migration

Co-Edited by Dr. Timothy Dunn, Sociology
Drawing on the concept of the "politics of compassion," this handbook interrogates the political, geopolitical, social and anthropological processes that produce and govern borders and give rise to contemporary border violence. Combining theoretical insights into structural violence and human rights with key case studies of border zones, this comprehensive handbook is crucial reading for scholars and researchers of social and political science investigating human migration, the humanitarian, border control and human rights.

Edward Elgar Publishing, 2021

Against Sex: Identities of Sexual Restraint in Early America

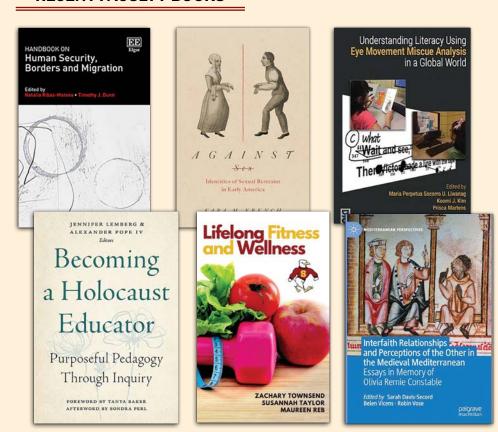
By Dr. Kara French, History
In this richly textured history, French investigates ideas about, and practices of, sexual restraint to better understand the sexual dimensions of American identity in the antebellum United States. French considers three groups of Americans — Shakers, Catholic priests and nuns, and followers of sexual reformer Sylvester Graham — whose sexual abstinence provoked almost as much social, mora, and political concern as the idea of sexual excess. The book makes clear that in assessing the history of sexuality, an expansive view of sexual practice that includes abstinence and restraint can shed important new light on histories of society, culture and politics.

University of North Carolina Press, 2021

Understanding Literacy Using Eye Movement Miscue Analysis in A Global World

Co-edited by Dr. Koomi Kim, Literacy Studies
This book brings together researchers, internationally
and transnationally, to share Eye Movement Miscue
Analysis (EMMA) research that deepens and expands
understandings of the reading process and addresses ways
to support the literacy development of diverse populations.
EMMA is an innovative method of study that combines
research on eye movement and miscue analysis to
examine how reading works. It is practical, research-based
and theoretically driven to help those in various academic
field understand and explore multiple dimensions of
literacy through EMMA in an expanding global world.

DIO Press, 2021



Becoming a Holocaust Educator: Purposeful Pedagogy Through Inquiry

Co-Edited by Dr. Alexander Pope IV, Secondary and Physical Education

Today's teachers seek to address the Holocaust not just as history, but also in relation to current events. Featuring stories from middle school, high school and university classrooms across the United States, this collection offers a comprehensive argument for the inclusion of purposeful Holocaust pedagogy rooted in literacy practices and historic content. Each narrative addresses the reasons that teachers engage students in deep, emotional and challenging inquiry; the struggles they encounter when broaching difficult content from the past and present; and what can happen when students have opportunities to raise their voices about issues of inequality, persecution and remembrance.

Teachers College Press, 2021

Lifelong Fitness and Wellness

Co-Author by Zachary Townsend, Exercise Science Lifelong Fitness and Wellness is intended to help students evaluate their personal health habits, behaviors and attitudes, while educating them about how to establish or maintain healthy lifestyle practices to improve both quality and quantity of life. Students learn about risk factors, behavior modification and goal setting in order to reduce their chances of developing chronic health problems.

Rebus Press, 2021

Interfaith Relationships and Perceptions of the Other in the Medieval Mediterranean: Essays in Memory of Olivia Remie Constable

Co-edited by Dr. Belen Vicens, History
This book is a collaborative contribution that expands
understanding of how interfaith relations, both real and
imagined, developed across medieval Iberia and the
Mediterranean. The volume pays homage to the late Olivia
Remie Constable's scholarship and presents innovative,
thought-provoking, interdisciplinary investigations of
cross-cultural exchange, ranging widely across time and
geography. (Read more about Vicens on page 9.)

Springer, 2021



Faculty Mini-Grant Program

The SU Faculty Mini-Grant Program provides awards up to \$3,000 to encourage faculty to develop research, scholarly or creative programs that provide the potential for sustained professional development and "seed funds" to secure additional extramural support. The following is an overview of this year's awardees.

Venus In Waiting: A Devised Theatre Project

Dr. Blake Harris, Music, Theatre and Dance

Venus In Waiting is a devised theatre performance that explores the expectations and experiences of queer identity through the image in the mirror, media, and the eyes of our loved ones. The process collages images, performance techniques, classic and developed texts, and performed through digital and live performance. The ever-evolving and intangible images (de) centralize the seemingly unattainable balance between social/familial expectations and self-expression. This project will spur LGBTQ+-centered conversations and potentially bring national attention to those involved.

Devised theatre is the creation of an original performance by the artists involved, often utilizing source texts and mutual interests as inspiration. Using Christopher Marlowe's Dido, Queen of Carthage as an initial starting place and juxtaposing it with the source material of independent gay films of the early 1990s, Harris exploits "theatre performance" to metatheatrically articulate the curatorial search for identity in the mirror and the media. This piece draws aesthetic inspiration from one of the most important, but often forgotten, queer filmmakers, Kenneth Anger.

The outcome of this project is a 1) performances for the campus that inspire important dialogue and 2) documentation for national grants and potential national and international performances. Firstly, this piece elevates the search for identity within the queer body and psyche, a process that many students and community members may experience. Harris facilitates post-performance talkbacks with the Office of Diversity and Inclusion and LGBTQ+ groups on campus to create a dialogue about LGBTQ+ identity. Students are able to experience experimental, multimedia performance art that is often not accessible outside of a larger city. Secondly, the entertainment industry was cautiously optimistic about reopening after the pandemic. This project allows Harris to fully realize a workshop production, document the piece, and apply for national grants and festivals (including the Hollywood Fringe Festival).





Exploring the Role of Sociocultural and Sociopolitical Factors in Second Language Acquisition Through the Lived Experience of Adult Immigrants

Dr. Derya Kulavuz-Onal, English

Adult second language learners, particularly marginalized adult immigrants, and the social contexts that shape their second language learning experiences only recently became a focus in second language acquisition (SLA) literature after being ignored for decades. In contributing to this line of research, Kulavuz-Onal uses a longitudinal multiple qualitative case study to explore the lived experiences of adult second language learners, who have immigrated to their countries of residence and who have started learning the language of their countries as an adult.

The preliminary goal of Kulavuz-Onal's study is to understand the role of sociocultural and sociopolitical factors in adult second language acquisition (e.g. race, social identity, agency, investment, language socialization, sociopolitical context, positioning, etc.), while also exploring their complex interaction with individual factors (second language learning motivation, personality, language learning beliefs and attitudes, etc.) in the language learning journeys and narratives of adult immigrants. The study utilizes a narrative inquiry approach to data collection through multiple in-depth interviews, written autobiographic narratives of their second language learning journeys, other artifacts as shared by the participants (e.g., visual artifacts, emails, writing samples, etc.) and researcher reflective journal. This research project aims to argue for the significance and role of social factors in particularly adult second language acquisition, and that these factors should be taken into account in not only TESOL teacher preparation but also ESOL teaching and program development for both adults and their children in K-12 schools.

Undergraduate Student Engineering Projects for Animal Enrichment at the Salisbury Zoo

Dr. Mark Muller, Physics

Muller is working with undergraduate students to create two animal enrichment engineering projects for the Salisbury Zoo. The first involves the design, fabrication, testing and installation of a data-collecting scratching post for the ocelot exhibit. The ocelot exhibit at the Salisbury Zoo has an existing scratching post rarely utilized by the animal. The zoo staff would like to replace the existing scratching post with one that will entice the ocelot to utilize it as well as collect data for the zoo staff.

The new scratching post is embedded with force sensors and data collection technology that measures and records the force of the ocelot's interaction with the scratching post as well as how often and what time of day the ocelot uses the post. It is a goal of the project to design a post that will entice the ocelot to use it during both night and day hours to create a unique viewing experience for zoo visitors while collecting valuable data for the zoo staff.

The second project involves the design, fabrication, testing and installation of an electro-mechanical feeding device for the jaguar exhibit. The device is fully controllable by zookeepers and it aims to entice the animal to interact with its food to stimulate hunting instincts. The device involves attaching the jaguar's food to a pulley and cable system that can raise and lower the food and horizontally move it across the exhibit. It is anticipated that the installation of a controllable electro-mechanical feeder will entice the jaguar to chase and jump for the food thus providing her valuable exercise and an enhanced living environment.

The Physics Department at SU is dedicated to creating undergraduate engineering project opportunities and these projects provide real-world experience with positive community impact and open the door for additional projects.





Why Do Peace Talks Fail? The Sri Lankan Case

Dr. Ignaciyas K. Soosaipillai, Conflict Analysis and Dispute Resolution

Soosaipillai examines the question "Why do peace talks fail?," using design influenced by two main factors. One, peace talks are one of the central tenets of international conflict resolution as it promotes international peace through peace talks. Many peace talks fail. Nevertheless, the question "Why do peace talks fail?" has not been explored adequately. Two, Sri Lanka has gone through numerous peace processes without success. These peace efforts involve purely bilateral talks and talks conducted with the assistance of third parties. Therefore, the international conflict resolution praxis could learn some lessons from the Sri Lankan experience.

With the end of the Cold War, civil wars between state forces and rebel groups that fight for self-determination or regional autonomy became the predominant form of international conflict (Woodhouse 1998). The trend continues even now. The Tamils, a minority group in Sri Lanka, struggled for regional autonomy since 1948 (Wilson 2000). The struggle turned into a fight for a separate state and turned violent in the 1970s. A high-intensity war continued for about 30 years with intermittent peace talks between Tamil rebels and Sri Lanka's government (de Silva 2013). The first negotiation took place in Thimphu, the capital of Bhutan, in 1984 with India's assistance (Dixit 2000). The government of President Premadasa and the Tamil Eelam Liberation Tigers (LTTE), the most powerful Tamil Rebel group, negotiated in the early 1990s (Weerakoon 1992). President Kumaratunga's government and the LTTE negotiated in 1994 (Wilson 2005). Norway assisted peace talks took place from 2002 to 2005 (Salter 205). These peace processes failed due to various reasons, and the war was terminated by military means in 2009 (Keethaponcalan 2019). Therefore, Sri Lanka is an apt case to study the reasons why peace talks fail.

This study sheds light on a question that is central to international conflict resolution success. The primary significance can be linked to practice as it could help improve intervention to resolve internal conflicts. This project's successful completion makes a significant contribution to the theory and practice of international peacemaking.

Off-Grid Living, Political Populism and The Pandemic: A Diachronic Study of the Earthship Eco-Housing Movement

Dr. Ryan Sporer, Sociology

Sporer is continuing the research of his dissertation (2018) with the longitudinal investigation of the off-grid housing movement of Earthships and other designs. This social movement/subculture is



part of a broader societal shift toward self-removal from dependent relationships (material infrastructures, markets and government) and creation of alternatives to secure subsistence and find meaning. Sporer terms this the politics of circumvention.

Ethnographic and interview data were gathered between 2013-2105. A second round of data collection was performed. Approximately 90 interviews were planned — perhaps the largest dataset of its kind

Previous results and preliminary analysis of current interviews are disproving many common assumptions of this population. For instance, those seeking and living off-grid do not seek autarchy existence, devoid of community. Counterintuitively, their move to an off-grid lifestyle is framed as a form of responsible citizenship that is created and maintained with other off-grid enthusiasts. Current data collection is structured to ascertain the effects of the global pandemic of SARS-CoV-2, populist political movements and recent developments like Texas power grid failure.

The content of the project resonates with SU students and many young people in general, who find themselves questioning both accepted societal goals (suburban home with white picket fence) and the means (debt-funded education and housing) by which to attain them. This is seen in the popularity of intentional communities, ecovillages, transition towns, tiny homes, van dwelling, minimalism and other alternative living arrangements.

Transition Assessment — Support for Students with Disabilities to Prepare for Life After High School

Dr. Andrea Suk, Secondary and Physical Education

Suk hopes to improve outcomes for high school students with disabilities by creating a teacher professional development session on transition assessment. After high school graduation, students with disabilities are less likely to be employed, participate in postsecondary educational settings and live independently (Test, et al., 2009; Huber et al., 2017). To address the poor outcomes, federal law requires Individualized Education Program (IEP) stakeholders (teachers, parents, students) to plan for a successful transition out of high school through the use of assessments (gather data and determine the strengths, needs and interests of students as related to postsecondary employment, education/training and independent living).

The myriad of assessments can be overwhelming to special education teachers. When students are not assessed properly by teachers, students are not only being denied their right to Free, Appropriate Education (as mandated by law), but they also experience inequitable obstructions. Through a professional development session, Suk reviews fundamental transition assessment concepts, demonstrates how to use assessments



and helps teachers practice the use transition assessments. Specifically, Suk highlights six assessments, including the TAGG, Landmark College Readiness, Employability/Life Skills, KU Self-Determination, ISEE Career Interest Survey, Life Skills Inventory, and the Postsecondary Education and Experience (PEaE) Assessment. The PEaE Assessment is a first-of-its-kind assessment Suk created to support IEP teams for students with more significant support needs who want to attend alternative postsecondary education environments.

Until now, no assessment tool was available to evaluate a student's skills or abilities in relation to application requirements into these programs. Through the training, Suk hopes to recruit teachers to use the PEaE assessment and build validity evidence.

Cinema as Life 24x a Second

Dr. Elsie Walker, English

The impetus of this project by Walker is her current book currently under contract with Oxford University Press, forthcoming in 2023. The book, titled Life 24x a Second, is an analysis of the value of cinema in our lives at large, including the ways that single films can resonate with what we experience and/or teach us how to manage those experiences better. While Walker's line of inquiry includes subjective concepts (such as "value" or "better"), that is part of the point — to explore and analyze how cinema matters on personal, unique, and nevertheless widely affective and understandable terms. This book is an extensive response to a celebrated and uncontested book by Laura Mulvey titled Death 24x a Second (Routledge, 2006), which insists on how films always represent lives already lost and death (or, what has already ended) in every frame. In other words, while Mulvey emphasizes concepts of loss and finality through cinema, Walker emphasizes concepts of ceaselessly life-enhancing gain.

This work complements the other sections of Walker's book that focus on what cinema "says" in relation to various facets of real life: the current pandemic, the Black Lives Matter movement, feminist politics, and common human experiences of grief and mortality. By dwelling on what individual students have continued to glean and learn from cinema after being taught by Walker, she is also making a generalizable study of the power films can have for us all by extension.

Walker has been teaching cinema for over 20 years. By surveying former students, she sees this project as an opportunity to learn more from what her students have continued to learn from cinema after college. \clubsuit

Graduate Research and Presentation (RAP) Grant Program (Spring and Fall 2021)

The Office of Graduate Studies and Research provides research grants, up to \$500, to help graduate students develop research and scholarly projects with faculty supervisors 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.

Evaluating the Relationship Between Injuries and Home-Range Movement Patterns in the Spotted Turtle (Clemmys guttata)

Karsin Bachran, M.S. Applied Biology

The spotted turtle (Clemmys guttata) is classified as an endangered species on the IUCN Red List and is continuing to decline. Clemmys *auttata* declines are typically due to habitat loss, predation and anthropocentric take. One of these causes, predation, can cause nonlethal injury as well as mortality in spotted turtles, with more than 7% of individuals having severe predatorinduced amputation of limbs or tails on the Delmarva Peninsula. Little is known about how injuries affect any freshwater turtle species' movement patterns, let alone ones with partially terrestrial lifestyles, and how that may affect their fitness. One of the primary aims of the project is to analyze the home range movement patterns of injured versus uninjured spotted turtles in Maryland and Delaware. This involves outfitting several turtles with radio telemetry transmitters and analyzing their movement patterns. Bachran compares data of injured and uninjured spotted turtles to assess if limb injuries are affecting their movement patterns or migration from aquatic to terrestrial habitats. Findings could help determine if predators' impacts are greater than just direct mortality and if nonlethal injuries affect populations and, potentially, persistence of this endangered species.



Evaluation of the Feeding Ecology and Population Metrics of Invasive Blue Catfish (Ictalurus furcatus) in the Nanticoke River, a Tributary of the Chesapeake Bay, U.S.A.

Zachary Crum, M.S. Applied Biology

Invasive species have the ability to cause widespread ecological impacts in aquatic systems. Blue catfish (Ictalurus furcatus) are considered an invasive species in the Chesapeake Bay and have raised great concern over the potential impacts they may be having on native species of conservation concern through predation. In an effort to address management concerns regarding the population expansion of blue catfish and gaps in the current literature, the project aims to provide the first assessment of the feeding ecology and population metrics of blue catfish in an Eastern Shore tributary of the Chesapeake Bay. This study employs multiple sampling methods to collect blue catfish from the Nanticoke River in Maryland and Delaware. Visual identification methods are coupled with DNA barcoding to identify stomach contents collected from fish to provide insight into trends in feeding ecology. Age estimates using lapillar otoliths collected from each fish produce useful information on the growth, mortality and size-age structure of this invasive population of blue catfish. The data gathered from this study provide fisheries managers with information needed to help determine the impact that blue catfish are having on species of concern in the Nanticoke River, including native alosines and endangered Atlantic sturgeon (Acipenser oxyrhinchus).



The Ecology of Writing, Feedback, and Revision Practices in an Upper-Level English Course

Kelsie Endicott, Ed.D. Contemporary Curriculum Theory and Instruction

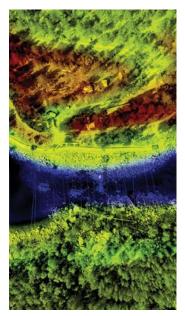
There is a dearth of knowledge that exists in empirical literature regarding how effectively upper-level college students (juniors and above) and their professors communicate during feedback rounds of written assignments, in addition to the resources that these students utilize when revising. Therefore, this qualitative, single case study explores how these college students and their course professor perceive the role of feedback and revision on written assignments in an English course, in addition to how the professor constructed feedback and how students interpreted the feedback and revised their written assignments. The theoretical basis of this work is rooted in three key assumptions: (1) that writing, feedback and revision are socially constructed (Vygotsky, 1978), (2) that these forms of communication are best understood by taking an ecological, or holistic, approach when studying them (Cooper, I 986), and (3) that writing and revision follow \boldsymbol{a} process approach (Murray, 1972). Data sources consist of classroom observations, interviews, documents and artifacts, and field notes. The data is analyzed by engaging in multiple rounds of coding using initial and a priori codes to examine the language of the participants in an effort to better understand the nuances of their communication and writing practices.



Geospatial Assessment of LNAPL-Impacted Site in Georgia Through UAV Photogrammetry

Brian Mainor, M.S. Geographic Information Systems Management

Environmental projects associated with the cleanup of light non-aqueous phase liquid (LNAPL) sites have often been limited due availability of photogrammetric and geospatial data available for the subject site. An LNAPL release at a city-owned facility in Madison, GA, is evaluated utilizing an unmanned aerial vehicle (UAV) to demonstrate the benefits and efficiency of acquiring hi-resolution imagery to photogrammetric applications, including accurate measurements and contaminant plume mignuion pathway assessments. The utilization of this technology is expected to reduce human health risk, increase data quality and efficiency, and improve remedial design efforts associated with LNAPL releases. Furthermore, this project demonstrates how the usage of UAV technology can simultaneously improve field data acquisition efficiency and reduce environmental impact and intrusion associated with foot traffic and/or ground machinery.



Investigations into Two Acetyl-CoA Assimilation Pathways in Rhodobacter capsulatus

Stephanie Miller, M.S. Applied Biology Acetyl-CoA, a two-carbon molecule, is utilized by all organisms in central metabolism, which is a cellular process that is used to produce biomass and energy. Acetyl-CoA can be assimilated through multiple pathways, including the ethylmalonyl-CoA pathway (EMCP) and the glyoxylate bypass (GB). Not all organisms have the genes for either of these pathways, and organisms that do have the genes will have the genes for either the EMCP or the GB. Currently, the only known organisms with the genes for both pathways are *Paracoccus denitrifican*s and Rhodobacter capsulatus. The operation of these pathways is characterized in P. denitrificans, but not in R. capsulatus. This work is concerned with characterizing the use of these pathways under different growth conditions.

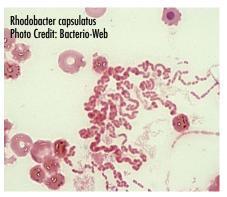
Needs Assessment for Parents and Caregivers of Children with Reactive Attachment Disorder

Anita Monyei, Master of Social Work

Reactive Attachment Disorder (RAD) is a stress-induced condition resulting from past trauma in early childhood (Ellis et al., 2020). This trauma is often due to social and emotional nealect or abuse impacting the child's ability to develop healthy attachment with one's caregiver. Due to this maltreatment, children may find themselves in a "fight, flight, freeze" mode (p. 1). Ellis et al. (2020) further indicate that this abuse often impacts the child's brain development, including memory and executive functioning. Research has suggested that children living in foster or residential care are at an increased risk of experiencing mental health disorders , which includes RAD (Millward et al., 2006). These risks include "conduct problems, emotional problems (anxiety and depression). hyperactivity, problems with peer relations, and Reactive Attachment Disorder" (Millward et al., 2006, p. 273). In order to successfully treat a child diagnosed with Reactive Attachment Disorder, early identification and intervention promise the best outcomes. An imperial part of treatment is for caregivers to be involved. This is why it is necessary to educate parents and caregivers about Reactive Attachment Disorder and to provide them with available resources and to connect them with treatment providers and agencies that are specifically trained and knowledgeable in treating attachment disorders especially in RAD.









Peripheral Nerve Regeneration Following Hyperglycemic Induction

Sheridan Sargent, M.S. Applied Biology

Nerve degeneration occurs in response to a number of metabolic, traumatic and autoimmune events in both the central nervous system (CNS) and peripheral nervous system (PNS). While regeneration is more efficient in the PNS than in the CNS, it is not perfect, nor are the mechanisms well understood. While eloquent, results from mammalian models are limited to snapshots in time of fixed nerves. Using zebrafish to study these dynamics, through the use of fluorescent transgenes and exploitation of their transparency, one is able to visualize these changes in vivo, allowing for a more complete picture of these critically important processes. Previous work from the Clark lab shows that hyperglycemia induces defasciculation of the motor axon, decreases myelination of motor axons and causes defects in perineurial glial sheath formation. As an undergraduate, Sargent looked at regeneration of the motor axons and myelin sheath after a seven-day incubation in 120 mM glucose and a recovery period. They hypothesized that the perineurium (the blood-brain barrier) will also regenerate following hyperglycemic induction and recovery. They also hypothesize that the regenerated peripheral motor nerves will regain functionality following the recovery period.

Hyperglycemia Impairs Vertebral Development in Danio rerio

Sheridan Sargent, M.S. Applied Biology

Diabetes mellitus and osteoporosis are globally prevalent chronic diseases with significant associated morbidity and mortality. Diabetic patients are at increased risk of bone fracture, but the understanding of how diabetes contributes to decreased bone health remains unclear. The Clark lab has previously characterized a model of hyperalycemicinduction in zebrafish larvae, which results in phenotypes similar to those seen in diabetic humans such as diabetic peripheral neuropathy. Here, Sargent proposes using the model to study the relationship between hyperglycemia and bone pathology. Through the use of fluorescent transgenes and exploitation of their transparency, one is able to visualize changes in the structure and cellular populations constituting mineralized bone in vivo. Preliminary data suggests that hyperglycemia impairs vertebral development in zebrafish larvae, which persists following a recovery period from hyperalycemia. This indicates hyperglycemia exhibits a prolonged effect on skeletal development. Here, Sargent proposes investigating changes in central cellular populations within the skeletal system of zebrafish in response to hyperglycemia. Understanding the impact of hyperalycemia to individual cellular populations may provide insight to the mechanism affecting bone health.

Effect of Low-Dose Mercury on Acetylcholinesterase

Jessica Strange, M.S. Applied Biology

Mercury, in its various forms, is ubiquitous. This element is naturally present in the environment in low doses. The enzyme acetylcholinesterase (AChE) has been shown to play a vital role in the anti-inflammatory cholinergic pathway, regulating the substrate acetylcholine. In this pathway, the inflammatory response is controlled, and the production of pro-inflammatory cytokines such as Tumor Necrosis Factor Alpha (TNF- α) are inhibited to reduce the inflammatory response. When the proinflammatory response occurs resulting in the inability to decrease production of these cytokines, the instance of proinflammatory disease, such as lupus and scleroderma, is increased. Additionally, previous studies have shown a correlation with mercury and other heavy metals with a dysregulation of AChE function in higher doses. The current work performed demonstrates that in vitro assays with AChE show a dysregulation of the enzymatic function with lower doses of mercury exposure than those previously tested. This study demonstrates an uncompetitive inhibition of AChE at doses that are environmentally relevant and potentially unlocking other therapeutic taraets for anti-inflammatory disease.

University Student Academic Research Awards (USARA)

University Student Academic Research Awards (USARA) are research grants, up to \$400, that are available to help support undergraduate research projects and creative endeavors related to developing and conducting projects with a faculty supervisor. These competitive funds support undergraduate research projects, directed by a faculty mentor, that may include research development, supplies, and the presentation of research/scholarly pursuits at national or regional meetings.

SPRING 2021 WINNERS INCLUDE:

Combating Local Bird Species Declines; Installation of Nest Boxes in City Park

Rose DeVito, Biology

Faculty Mentor: Dr. Jeremy Corfield

Human-Capuchin Coexistence in Touristic and Non-Touristic Mangrove Islands, Maranhao State, Brazil

Christian Ciattei, Geography Faculty Mentor: Dr. Andrea Presotto

Regulation of Acetyl-CoA Assimilation by RamB in *Rhodobacter capsulatus* SB 1003

Caitlyn Edman, Biology Faculty Mentor: Dr. Michael Carter

Estimating Predator Activity in Endangered Spotted Turtle Habitat Using Camera Traps

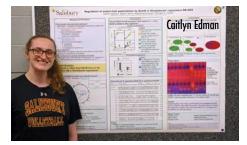
Marissa Mills, Biology Faculty Mentor: Dr. Eric Liebgold

Developing and Anti-Racist Climate at a PWI: An Undergraduate Perspective

Sebastian Navas, Psychology Jennifer Welch, Psychology Faculty Mentor: Dr. Yuki Okubo

Spectroscopic Investigations into Nucleic Acid Secondary and Tertiary Structure

Brandon Tenaglia, Chemistry Faculty Mentor: Dr. Joshua Sokoloski











FALL 2021 WINNERS INCLUDE:

Development of Microwave-Assisted CdSe/ZnS Synthesis and Fabrication of Culns2/CdSeQD Xerogel-Polymer Blend Solar Devices

Wyatt Gibbs, Chemistry Faculty Mentor: Dr. Lena Woodis

A Case Study in Genetic Hearing Loss: Identifying the STRC-CATSPER2 Mutation in a Female Presenting with Mild-To-Moderate Hearing Loss

Margaret Giggey, Biology Faculty Mentor: Dr. Les Erickson

Investigation of Ascorbate-Dependent Oxidoreductase in R. eutropha H16

Marrissa Izykowicz, Biology Faculty Mentor: Dr. Michael Carter

Poplar Island Herpetofauna Study

Sophia Liceaga, Environmental Studies Faculty Mentor: Tami Ransom

Investigations into Multiple Acyl-CoA Assimilation Pathways

Aerin Rost-Nasshan, Biology Faculty Mentor: Dr. Michael Carter



Summer Student Research Successes

From studying spotted turtles, to developing safer MRI contrast agents and the use, and development of fairy tales during a pandemic, Salisbury University students spent their summer researching a variety of topics.

Over 30 students presented their results during a poster session at SU's annual Summer Student Research Showcase. Several of the projects were highlighted with a video and may be viewed online under the "Research" playlist on SU's YouTube channel:

www.youtube.com/user/salisburyuniversity

Usability Study of UWLES Connect Website

Kutter Aaron and Joshua Cobb • Faculty Mentor: Dr. Xiaohong Wang

Stability of Tertiary and Secondary Structure Within the Noncoding Regions of Coronaviruses

Usra Alaraki • Faculty Mentor: Dr. Joshua Sokoloski

Salisbury Zoo Andean Bear Exhibit Fabrication

Jeri Alexander and Jared Alexander • Faculty Mentor: Dr. William Wolff

Turtle Versus Predator: The Relationship Between Predator Activity and Sex Ratio of Endangered Spotted Turtles (Clemmys guttata)

Aaliyah Beam • Faculty Mentors: Dr. Eric Liebgold and Dr. Tami Ransom

Differences in Peak Power Influence Metabolic Rate Responses from Squats Using Varying Explosive and Recreational Contractions

Gerard Boyd • Faculty Mentor: Dr. Scott Mazzetti

The Effects of Functional Body-Weight Training on Resting Blood **Pressure Measures**

Mason Cervantes • Faculty Mentor: Dr. Masoud Moghaddam

Land Use and Water Quality Correlation in the Wicomico River Watershed: A Geographic and Sustainability Analysis

Allison Dreiss • Faculty Mentor: Dr. Gina Bloodworth

The Ecology of Writing, Feedback, and Revision Practices in an **Upper-Level English Course: Preliminary Findings**

Kelsie Endicott • Faculty Mentor: Dr. Maida Finch

Graph Clustering with Applications on COVID-19 Growth Data Across the United States

Joseph Fernandez • Faculty Mentor: Dr. Enyue Lu

Biaryl Monophosphine Ligands for More Efficient Cross Coupling Reactions

Kyle Hensley • Faculty Mentor: Dr. Anthony Rojas

May Literacy Center Culturally Sustaining Pedagogical Practice Study

Nora Hetzler and Elaine Ferraro • Faculty Mentor: Dr. Brian Flores

The Nature of Preservice Teachers' Digital Literacies Practices and **Implications for Their Future Careers**

Megan Hines • Faculty Mentor: Dr. Maida Finch

Reimagining Burma's Future Beyond Aung San Suu Kyi: A Philosophical Exploration

Tharaphy Khin • Faculty Mentor: Dr. Cristina Cammarano





Contemporaneous Urban Conflicts with Ancient Greek Plans: The Case Study of New York City

Dylan Laconich • Faculty Mentor: Dr. Amal Ali

Navigating Growing Up Biracial

Janice Lee • Faculty Mentor: Dr. Cristina Cammarano

The Effects of Lavendustin-A on Peripheral Nerve Degeneration in Hyperglycemic Zebrafish

Madison MacDougall • Faculty Mentor: Dr. Jessica Clark

Simple Robust Learning of Some Simplicial Polytopes

Blaine Mason • Faculty Mentor: Dr. Joseph Anderson

The Sedimentological Properties of a Submerging Freshwater Tidal **River System**

Delany Midash • Faculty Mentor: Dr. Brent Zaprowski

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Summer Student Research Successes (Continued)

Redundancies in Evolution? The Utilization of Multiple Acetyl-CoA Assimilation Pathways in a Single Bacterium, *Rhodobacter Capsulatus* SB1003

Stephanie Miller • Faculty Mentor: Dr. Michael Carter

Habitat Assessment of the Endangered King's Hairstreak Butterflies Connor Morningred and Brittany Grubb ◆ Faculty Mentor: Dr. Dana Price

Demystifying Digital Discourse: Baby Boomers Talk Tech Anne Noctor ● Faculty Mentor: Dr. Farzad Karimzad Sharifi

SU Nursing Students' Knowledge, Attitude, and Experience of LGBTQ+ People

Kreena C. Patel • Faculty Mentor: Dr. Eun-Jeong Han

Comparing Energy Expenditure During and After Different Squats with Matched Work but Varying Contraction Intensities and Loads Ethan Robbins • Faculty Mentor: Dr. Scott Mazzetti

Investigation into Multiple Acetyl-CoA Assimilation Pathways in a Single Organism

Aerin Rost-Nasshan • Faculty Mentor: Dr. Michael Carter

Hyperglycemia Impairs Vertebral Development in *Danio rerio*Sheridan Sargent ● Faculty Mentor: Dr. Jessica Clark

The Effects of Mercuric Chloride on Aceylcholinesterase In Vitro Jessica M. Strange ● Faculty Mentor: Dr. Jennifer Nyland

Who Gets to be a Knower: Tackling Epistemic Injustice in Collaboration with the REACH Initiative

Haley Taylor • Faculty Mentors: Dr. Timothy Stock and Dr. Michèle Schlehofer

Investigating RNA Aggregations and their Possible Role in SARS-CoV-2 Viral Synthesis

Brandon Tenaglia • Faculty Mentor: Dr. Joshua Sokoloski

Is COVID-19 Impacting Socioemotional Goals in Young Adults?
Samantha Walsh ● Faculty Mentor: Dr. Echo Leaver

The Relationship between Climate Change, Crop Yield, and Pesticide Use on Potato Crops in Idaho, 1990-2020

Destiny Williams • Faculty Mentor: Dr. Alexandria McCombs

Pestilence, Plague and the Pied Piper: Living with Fairy Tales in the Post-Truth Pandemic World

Mikayla Wiseman • Faculty Mentor: Dr. Ryan Habermeyer

An Examination of Professional Alternative Dispute Resolution Practitioners in the United States: Preliminary Findings

Alison Wright ● Faculty Mentors: Dr. Brian Polkinghorn and Dr. Brittany Foutz



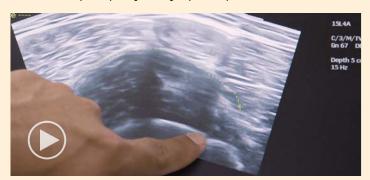
Designing New Zoo Enclosures

Art majors Jeri and Jared Alexander applied the design concepts to build new doors for the bear and lynx enclosures at the Salisbury Zoo.



Tracking the Sex Ratio of Declining Spotted Turtle

Bugs, rain and muddy conditions were no deterrent to biology major Aaliyah Beam, who tracked spotted turtles, exploring why they are finding more males than females and how that may be impacting the longevity of the species.



Home-Based Exercise Programs

Health and human performance graduate student Mason Cervantes studied home-based exercise and its impacts on blood pressure, examining how health metrics can improve in just four weeks.



Tracking Endangered King's Hairstreak Butterflies

Biology majors Brittany Grubb and Connor Morningred attempted to locate the stateendangered king hairstreak butterfly and their habitat to learn more about them and how they can be preserved.



Creating a Safe, More Effective MRI Contrast Agent

Biology students Marrissa Izykowicz and Kyle Hensley developed a lead-based contrast agent that could be a safer and more effective MRI contrast agents.



Fairy Tales and COVID-19

English graduate student Mikayla Wiseman investigated the extent to which fairy tales have shaped cultural and artistic responses to the COVID-19 pandemic, from storybooks and film to memes and political cartoons.



Evolution of Duck Beaks and Brains

Psychology majors Alyson Madigan and Thomas Sistek studied the species evolution that has helped ducks' beaks adapt to suit their needs for finding food.



Nanticoke River Swamp Land Development Over 400 Years

Earth Science major Delany Midash attempted to determine what the Nanticoke River system first looked like when explorer John Smith traveled here, researching how the landscape may continue to change with rising sea levels and how to develop a comprehensive mitigation plan.



Investigating Pathway to Bioplastics

Applied biology graduate student Stephanie Miller and biology major Aerin Rost-Nasshan investigated a metabolic pathway within cells.



Gaining A Deeper Understanding of Mercury Exposure

Recent biology graduate Jessica Strange looked at low-dose exposure to mercury and now is researching the body's inflammatory response to certain bacteria along with mercury as a graduate student at SU.



Aging and the Pandemic

Psychology major Samantha Walsh explored socioemotional subjectivity theory (SST), which posits that as people age, their values and goals become more based in emotion than knowledge, as it applies to the COVID-19 pandemic.



Culturally Sustaining Teaching Practices

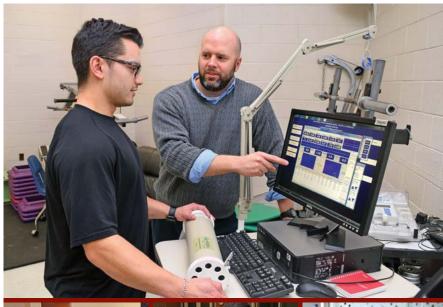
Graduate student Nora Hetzler looked at the use of cultural-sustaining pedagogy in SU's May Literacy Center, allowing students to learn in a way that is consistent with their background and identity, fostering a stronger and more inclusive educational environment.



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