A PUBLICATION OF THE USF ST. PETERSBURG CAMPUS

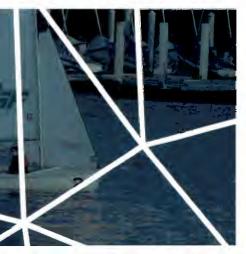
INNOVATIONS MAGAZINE

VOLUME 3 | 2022

CONSOLIDATION EXPANDS PROGRAMMING page 6

ENVIRONMENTAL AND OCEANOGRAPHIC SCIENCES CENTER OF EXCELLENCE page 18

NATIONAL MERIT SCHOLARS page 20



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IN THIS ISSUE:

LETTER FROM THE REGIONAL CHANCELLOR
CONSOLIDATION EXPANDS PROGRAMMING
COMBATING HUMAN TRAFFICKING
RESPONDING TO PINEY POINT
HIGHER ED. ACCESS FOR ALL
PRESERVING BLACK CEMETERIES
A HUB FOR FINTECH
ENVIRONMENTAL AND OCEANOGRAPHIC SCIENCES CENTER OF EXCELLENCE
NATIONAL MERIT SCHOLAR



REDUCING RELATIONSHIP CONFLICT DURING THE PANDEMIC
ADDRESSING RACIAL JUSTICE
FATHER OF ENVIRONMENTAL JUSTICE
INTERNATIONAL RECOGNITION
CAMPUS LIAISON
THE CASE FOR CARBS
COMPLEX LIVES OF REPTILES
2021 IN PHOTOS

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A MESSAGE FROM THE REGIONAL CHANCELLOR

This past year was another one for the history books. As we slowly emerged from the COVID-19 pandemic, students returned to campus and we all started adjusting to the "new normal." But despite any lingering challenges, we forged ahead, continuing the activities, initiatives and research that make the USF St. Petersburg campus a distinctive and desirable place to learn and grow.



We welcomed a large and distinguished class of first-year students, including five National Merit Scholars, the first in our campus' history. We also launched new programs in the arts and expanded the accelerated nursing degree program. Now we're moving forward with an ambitious new plan to create an interdisciplinary center of excellence in environmental and oceanographic sciences, which will include a regional and national hub for the study of climate change, including sea level rise and other coastal hazards.

Our campus continued to prioritize diversity and inclusion and took several meaningful steps to advance progress in that area in 2021. We made progress with our partners in the St. Pete/Pinellas County Higher Education for Race Equity (SPHERE) consortium toward the creation of a Truth, Racial Healing and Transformation Center. The Center will help our region in identifying and dismantling racial hierarchies. We also created the Racial Justice Fellows program, allowing college students an opportunity to be at the center of our efforts to create systemic change.

Of course, our talented and dedicated faculty continued to pursue big ideas and share knowledge through their groundbreaking research. For example, assistant professor Sean Doody traveled to Australia to catalogue the secret social lives of reptiles, while History Professor J. Michael Francis was recognized by King Felipe VI of Spain for his work uncovering the Spanish roots of Florida's earliest history.

You'll read about all of this and more in this edition of Innovations, which provides a window into the important and beneficial work that occurs on our campus every day. We continue to push boundaries and advance our understanding of the rapidly changing world around us, and we're so pleased to have you along on our journey.

Please enjoy the magazine and share it with others. I continue to be so proud of the work we do on the USF St. Petersburg campus. Thank you for your continued support.

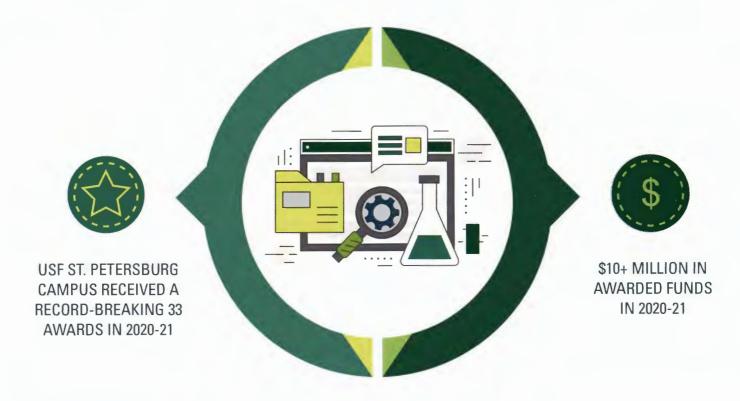
Regards,

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Martin Tadlock Regional Chancellor USF St. Petersburg campus

THE BUILDING BLOCKS OF OUR SUCCESS

USF ST. PETERSBURG CAMPUS RESEARCH FUNDING DOLLARS ARE INCREASING



FUNDING AGENCIES

Our distinguished faculty receive research grants from some of the most prestigious institutions:

Florida Fish and Wildlife Conservation Commission Ford Motor Company National Historical Publications and Records Commission National Institute of Child Health and Human Development National Science Foundation Proteus Fund Southern AIDS Coalition

PARTNERSHIPS

Our work is enhanced by the valuable partnerships in our community and beyond, including:











BRINGS EXPANDED ACADEMIC PROGRAMS AND OPPORTUNITIES TO ST. PETERSBURG CAMPUS

Harbor Hall, the home of the graphic arts program, was newly renovated to house greater gallery and studio spaces and create a more aesthetically modern environment for students to showcase their work.

Matthew Cimitile and USF College of Nursing

Several courses focused on the arts industry and architecture were offered for the first time on campus this fall semester, while ongoing collaborations seek to enrich the curriculum with experiences in animation, dance and theater.

The USF Health College of Nursing expanded the number of baccalaureate students in the accelerated nursing pathway at both the Sarasota-Manatee and St. Petersburg campuses to meet community needs and alleviate the critical nursing shortage.

And the Hospitality Management degree is planned to hop over the Skyway Bridge from its home in Sarasota to provide St. Petersburg and Tampa students the opportunity for a high demand degree in a hospitality hotbed.

The potential for greater access to resources, expanded learning outcomes and research experiences for both undergraduate and graduate students was a prime driver for consolidating the three USF campuses. A year and a half since consolidation, the expansion of arts, nursing and hospitality programming on the St. Petersburg campus demonstrates that potential coming to fruition.

ARTS PROGRAMMING GROWS

New courses and opportunities for greater academic experiences are the start of what leaders in the College of The Arts say will be a sustained expansion of arts programming and opportunities at the St. Petersburg campus.

"Offering these new courses was the initial low-hanging fruit we wanted to get done in the first year of consolidation as we build up partnerships and opportunities among campuses and with the city of St. Petersburg," said Chris Garvin, dean of USF's College of The Arts. "Our strategy is to spread offerings across all the campuses and give students the best of both worlds, providing as much of the arts curriculum and allowing flexibility."

The arts industry course highlights the role the arts play as an economic engine and connects students both academically and physically with the local arts community. To do that, the College of The Arts partnered with staff at the Dali Museum and the new Museum of the Arts and Crafts Movement, both in downtown St. Petersburg, to host special topics classes. "A student graduating with a bachelor of fine arts degree is as likely to get a job as someone with a degree in business administration," Garvin said. "The myth is if you go to school for business you get a job, but if you go to school for arts you move back in with your parents, and that is something we want to debunk."

The graduate architecture class brings together practitioners from St. Petersburg and its sister city of Aberdeen, Scotland to collaborate with students to develop urban design solutions. Students enrolled in the graduate course used St. Petersburg's 2050 Vision and Aberdeen City Center's Masterplan as a conceptual foundation for design proposals and worked out of a dedicated studio space in Harbor Hall.

Around the same time the new art courses were offered, Harbor Hall, the home of the graphic arts program, opened its newly renovated doors with greater gallery and studio spaces and an aesthetically modern environment for students to showcase their work and visitors to appreciate their creative endeavors.

Harbor Hall's renovation was made possible by a generous \$1 million gift from the estate of Josephine Hall. The gift spurred many upgrades



that enabled creative and collaborative endeavors.

"It allowed us to develop a plan to meet student needs, such as establishing a computer lab that would better support their design work while also allowing for animation courses on campus one day," said Jennifer Yucus, USF St. Petersburg campus associate director of the School of Art & Art History.

Other renovations include the incorporation of magnetic display panels in classroom studios and the main corridor, new monitors with Apple TV connectivity that will enhance design teaching methods and more sustainable LED fixtures to create better white light for display and production of graphic art. Overall, the building now contains five studio spaces along with a public gallery.

"One of the big things our community was asking for was a gallery space so the campus could participate in activities such as art walks," Yucus said. "Seniors will now have a facility to exhibit their final projects, visitors can now come in and see what students are working on and we hope to host the work of nationally-known designers."

Beyond the new class offerings and greater gallery space, discussions are underway to develop a concentration in animation at the St. Petersburg campus in the near future. Talks are also taking place with the Mahaffey Theater to potentially offer theater and music programing for students at the state-of-the-art performing arts facility and concert hall.

"The Tampa Bay region offers a fantastic learning lab for the arts," Garvin said. "There is a strong museum base, many institutions for

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Our community has been asking for years for such a program that prepares students for careers in this in-demand industry here in St. Pete. It will be a great addition to the campus and adds to the list of opportunities available for our students. dance, music and theater and just a breadth of cultural diversity that few places in the country have for young artists to get their feet wet, start their career and practice their vocation."

COLLEGE OF NURSING ADDS SEATS TO ACCELERATED PATHWAY

The national nursing shortage was a concern for several years, but that shortage became highly exacerbated by the COVID-19 pandemic. The U.S. Bureau of Labor Statistics now estimates 1.1 million new nurses will be needed by 2022.

As a result, USF College of Nursing leadership decided to double the Sarasota-Manatee nursing cohort to 80 students and increase the St. Petersburg cohort from 30 to 50 students.

"We are proactively working to address the growing need for additional nurses in Florida," said Usha Menon, PhD, dean of the College of Nursing and senior associate vice president of USF Health. "Many of our students remain local post-graduation. The increase in graduating nurses will have a direct impact on our very own nursing community."

USF's Accelerated Second Degree pathway is intended for students who already have a bachelor's degree and are looking to earn a Bachelor of Science in Nursing. The student can complete the program in four semesters (16 months). Since the pathway's inception, there has been rising need among community partners for additional nurses. The accelerated nursing pathway on the St. Petersburg campus welcomed its first cohort in the fall of 2019.

"The expansion of our USF Health College of Nursing enrollment will have a lasting impact in Florida and across the nation in addressing the looming nursing shortage, with a greater number of highly-trained, compassionate nurses delivering excellent care to their communities," said Charles Lockwood, senior vice president for USF Health and dean of the USF Morsani College of Medicine.

The expanded cohort launched in the fall of 2021 in St. Petersburg and is expected for the

spring of 2022 in Sarasota-Manatee. This expansion is part of a strategic initiative the College of Nursing has undertaken to streamline the undergraduate program to have a greater impact on reversing local and national nursing shortage trends.

"There is a critical shortage of nurses in our region, and we're pleased to help fill that workforce need," said Martin Tadlock, regional chancellor of USF's St. Petersburg campus. "We are located near several outstanding hospitals and health care institutions, so this allows us to provide our students with exciting career options in a field that will continue to be in high demand."

HOSPITALITY MANAGEMENT IN THE SUNSHINE CITY

A degree that prepares graduates for global leadership positions in hospitality is making its way to a city that is a center for tourism. The bachelor of science in Hospitality Management is planned to be offered on the St. Petersburg campus starting in the fall of 2022.

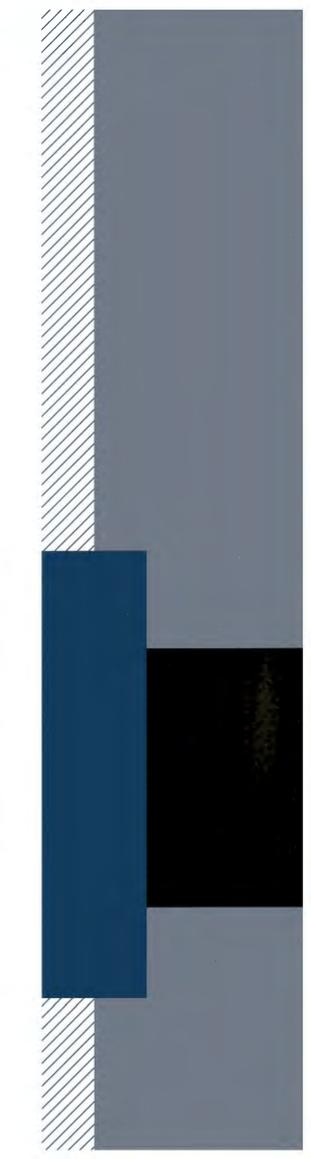
Through foundational knowledge of hospitality operations and experiences that develop critical thinkers, the program provides the basis for leadership positions at top hotels, cruise companies, theme parks, restaurants, private clubs and tourist attractions across the globe.

Currently the degree is only offered on the Sarasota-Manatee campus. When it makes its way to the Sunshine City, it will complement a hospitality leadership program already offered on campus geared to help managers and team leaders working in the hospitality industry thrive in their careers.

"We are really pleased to be able to offer this major that will address local workforce needs," Tadlock said. "Our community has been asking for years for such a program that prepares students for careers in this in-demand industry here in St. Pete. It will be a great addition to the campus and adds to the list of opportunities available for our students."



The announcement of this expansion comes at a time when the hospitality management program is on the rise. In July 2020, the school received professional and academic accreditation from the Accreditation Commission of Programs in Hospitality Administration (ACPHA). In November 2021, a new partnership was announced with McKibbon Hospitality to create an innovative hospitality teaching lab program designed to give students first-hand experience in hospitality management at some of the world's largest hotel brands, including Marriott and Hilton.



COMBATING HUMAN TRAFFICKING IN FLORIDA

Sarah Sell

As a mental health counselor in the early 2000s, Joan Reid saw firsthand how young the victims were of human trafficking and the devastating effects it had on survivors. For years, she learned more about the issue, **researching** and collecting data on the prevalent illegal activity while becoming a criminology professor at the University of South Florida. Her passion and dedication to the cause has now resulted in the first research lab devoted to studying human trafficking in Florida.

In September of 2021, the Trafficking in Persons (TIP) Risk to Resilience Research Lab officially opened on the University of South Florida St. Petersburg campus.

"We realized there was a much larger group of youth who were vulnerable to this than previously understood," said Reid. "I came up with



the conclusion that any kid is vulnerable. Given the right situation, **meeting** the right trafficker, any person, any child can be manipulated into this."

The research lab, which is a collaboration among professors at all three USF campuses, helps stakeholders, including non-profit groups, legislators and law enforcement agencies, by providing accurate data and resources about victims of human trafficking. Reid and her colleagues initially received a \$92,000 USF Strategic Investment Award in 2020 to start the research lab, whose goal is to make the region resilient to human trafficking.

"As we began looking at this, we realized Florida does not have a unified data center for human trafficking," Reid explained. "As we were interviewing stakeholders, it became apparent that many of them were lacking data; the data they needed to do their work."

Since then, Reid and her colleagues have created projects that are bridging information gaps in human trafficking, which helps organizations locate and access services quickly and efficiently. The lab will continue to be funded through grants and donations.

"I have been working and building collaborations specifically with researchers and community practitioners to address



issues of violence," said Shelly Wagers, a criminology professor and former Largo police officer who interviewed nearly 100 stakeholders for the TIP lab. "I have developed a group of strategic partners that represent all those different groups and who are working with us to develop a system so they can provide access to care." Florida currently ranks third in the United States based on the number of human trafficking hotline reports. Tampa Bay is considered a hotbed for child sex trafficking due to its vulnerable youth and influx of travelers. Reid says the state is taking action by creating antihuman trafficking legislation.

"One encouraging thing is that when research shows there is a problem, the legislative bodies have been extremely responsive passing laws that protect survivors of human trafficking or increasing penalties for types of trafficking of certain vulnerable populations," Reid said. "Florida has led the way for other states to model their legislation."

The grand opening of the TIP lab was a way for Reid and other USF researchers to recognize those who have played key roles in initiating anti-trafficking legislation. The human trafficking disrupters of 2021 included Attorney General Ashley Moody, State Sen. Manny Diaz Jr., State Rep. Jackie Toledo, R-Tampa and Brent Woody, executive director of the Justice Restoration Center, a non-profit organization that addresses the legal needs of survivors.

"I am passionate about the fight against human trafficking," said Toledo during the grand opening event. "The legislation that we filed this year was the tip of the iceberg on what we can do for victims and stop treating them like criminals. I will continue to fight and help in the future to eradicate human trafficking."

Reid and her colleagues are confident the TIP lab will help answer important questions about survivors and how they get involved, to eventually reduce the amount of trafficking that takes place across the state.

"Research is limited by the data that you have, and it's difficult to get data on such crimes," Reid said. "My goal is to become a good source of data for those who are researching human trafficking."



Kristen Kusek

Most of us had been working from home for more than a year when the lining in the Piney Point "gypstack," the retired fertilizer processing plant in Manatee County, Florida, failed at the end of March 2021. The event seized Florida headlines, spiked blood pressures, and required the release of 215 million gallons of nutrient-laden wastewater into Tampa Bay.

It also plucked many of us out of our COVID-19 cocoons.

"We were fortunate to be able to mobilize our research group in short order," said Tom Frazer, dean of the USF College of Marine Science (USF CMS). "Rapid deployments like this one provide us with an unprecedented opportunity to get out there and provide the science necessary to help inform an effective response, as well as any necessary mitigation efforts, so that we can safeguard our vulnerable coastal resources."

Between April 7 and June 22, USF conducted five research cruise efforts in response to the spill involving three field research teams. Shorebased sampling and small-boats (in partnership with the Florida Fish & Wildlife Commission) were also conducted throughout April to collect additional data in the vicinity of the spill.

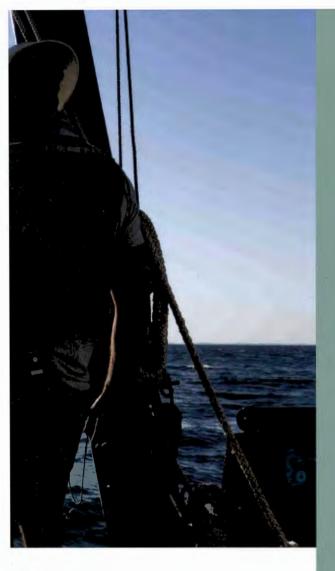
"COVID put the breaks on field work in a major way," Frazer said, "and while responding to an environmental emergency is never fun, getting back into a research groove sure was." All field operations and related media events were held in a USF-approved COVID-safe manner.

The aim was to figure out a wicked problem: how Tampa Bay would respond to such a significant influx of nutrients.

"The nutrient chemistry of seawater is a complex issue, and that is certainly true for Tampa Bay," said USF chemical oceanographer Kristen Buck, who led the largest research team abord the R/V Weatherbird II, a ship that was also used in the Deepwater Horizon oil spill response effort led by USF. The initial Weatherbird cruises were made possible by USF's partnership with the Florida Institute of Oceanography (FIO).

Buck's team, many of them graduate students for whom this was their first shipboard science experience, collected samples for analyses of dissolved inorganic carbon, pH, nutrients, metals, radioisotopes, bacteria, and phytoplankton. These initial samples were further processed in partnership with other USF labs and partners at Fish and Wildlife Research Institute and Florida State University.

"It was remarkable to see all of our partners around Tampa Bay team up in the response effort," Frazer said. The full suite of the data being collected at Piney Point, including USF's data, was displayed on a dashboard maintained by the Tampa Bay Estuary Program.



In addition to Buck's team, biological oceanographer Steve Murawski, who led the global 10-year Deepwater Horizon research response effort, headed up a fish health team including Eckerd College scientists.

The third field team involved physical oceanographer Mark Luther; PhD student and researcher Jay Law; and others who deployed three sensors on the floor of the bay. These allowed the team to access data in real-time, from the comfort of their desks — such as pH, dissolved oxygen, salinity, temperature and chlorophyll. The sensors were from the lab of partner Jim Ivey, an environment scientist on the USF St. Petersburg campus.

All three field efforts were supported by a modeling group back at the USF CMS. A team led by physical oceanographer Bob Weisberg adapted an ocean circulation model initially developed to track red tide to understand where the released water would go based on winds, tides, and currents. This Tampa Bay Coastal Ocean Model has been available to the public **```**

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as a nowcast/forecast model since September 2018 when it was used to simulate how Tampa Bay responded to Hurricane Irma.

Additional USF groups led by optical oceanographer Chuanmin Hu and biological oceanographer Frank Muller-Karger leveraged satellite imagery to monitor the dispersal of the discharged water.

KEY TAKEAWAYS

As the scientists expected, the area in the immediate vicinity of Port Manatee was subject to a spike in nutrient concentrations and a corresponding increase in phytoplankton, microscopic plant-like organisms that form the base of the marine food web. They grew quickly, Buck said, and the assemblage was dominated by a kind of phytoplankton called diatoms. The initial bloom was not the toxic phytoplankton responsible for red tides and measured about 25 square kilometers in size.

In addition, within one month the concentrations of nutrients within the discharged water diluted at least 1000-fold, according to the Tampa Bay Coastal Ocean Model.

"Although the residency time of water in Tampa Bay is on the order of months and the bay flushes slowly, the discharged water seems to have been diluted pretty quickly," Weisberg said.

Many questions remain and any longer-term impacts on the ecosystem remain unknown. The significant red tide that took hold in the summer of 2021 was likely exacerbated by the residual nutrients from the Piney Point event, said Frazer.

The USF research team was recently awarded a grant by the Department of Environmental Protection (DEP) to continue the analyses so they can facilitate a comprehensive assessment of Piney Point's impacts on water quality and the ecological health of the Tampa Bay region.

HIGHER EDUCATION ACCESS FOR ALL

EXPANDING OPPORTUNITIES AND THE COLLEGE EXPERIENCE FOR YOUNG PEOPLE WITH INTELLECTUAL DISABILITIES

Matthew Cimitile

Logan Lavery always wanted to go to college. But as one of around 6 to 7 million people living in the United States with an intellectual disability that impacts learning, reasoning and problem solving, it seemed unattainable.

Colleges typically did not welcome such students to campus or provide the needed services for them to thrive.

That all changed on USF's St. Petersburg campus when the UMatter program was launched to provide this population the opportunity to experience higher education and campus life. In the fall of 2021, the program welcomed its first cohort of seven students, providing learning and social skill training, along with career development, to assist these young people in navigating the transition from high school to college while becoming competitively employed and living independently.

"I wanted a community, a welcoming community," Lavery said. "And this program

is so welcoming to new students like me and provides so much help with personal and classroom problems."

Now just a month after welcoming its first cohort, a \$1.2 million gift from Andrew and Eileen Hafer will give even more students like Logan the opportunity to experience higher education. The gift, made to the USF Foundation, will name the program after the donors and help fund its operations and year-round initiatives for participating students, including scholarships for tuition, housing, fees and other expenses.

> "We couldn't be happier to be part of the USF UMatter program as it pioneers new strides in inclusivity," said Eileen Hafer. "At its core, UMatter is relational. It helps to remove obstacles that allow division based on human differences. I believe this program promotes a perspective and empathy for all those involved and strengthens the diversity of our USF community overall."



UMatter, which was launched on the St. Petersburg campus through a \$900,000 grant awarded by the Florida Center for Students with Unique Abilities, will now expand to all three of USF's campuses thanks to the Hafers' gift. The gift will also fund the Hafer Family Endowed Professorship for the program, an appointment created to provide ongoing support and mentorship to participants.

"UMatter is about providing the same kind of adult life opportunities that any other individual would want in our society," said Lyman Dukes III, professor of special education and co-principal investigator of the program. "There has been this misperception that people with these disabilities do not have the aptitude to learn. But we now know and the data clearly indicate that young people that participate in these types of programs are employed at much greater rates, earn higher salaries, live independently more often and have a better quality of life." an individual for extraordinary dedication and service to the leading association for individuals committed to improving the inclusion of people with disabilities in higher education and beyond. It is one of AHEAD's two highest honors.

Dukes credits an experience as an elementary student with greatly influencing his career path.

"While in elementary school at Shore Acres Elementary here in St. Petersburg I had a transformative experience with a fellow student who had developmental disabilities," Dukes explained. "He joined our fourth grade class early in the school year and the class teacher asked me to serve as his 'mentor.' I learned at a young age that people with disabilities had the same goals as any other child, that is, to have friends, to learn and to have fun."

At its core, UMatter is relational. It helps to remove obstacles that allow division based on human differences. I believe this program promotes a perspective and empathy for all those involved and strengthens the diversity of our USF community overall.

For Dukes, being able to provide such opportunities in higher education has been a lifelong passion. He has been a professor at USF's St. Petersburg campus for the past 20 years and a leading expert on students with disabilities and their transition into higher education.

His outstanding contributions to the field were recognized recently with the Ronald E. Blosser Dedicated Service Award from the Association on Higher Education and Disability (AHEAD). The award is given to Goals that Lavery is now experiencing in college and a part of the St. Petersburg campus community.

"Living on campus has really helped me be so much more independent, allowed me to make friends and be part of clubs and active in this community," Lavery said, who is a member of the dance and puppy raisers club. "This program and its staff believed in me and are helping me plan for my future."

PRESERVING BLACK CEMETERIES

RECOVERING LOST HISTORY BY PRESERVING THE MEMORY AND PHYSICAL SPACES OF HISTORICAL BLACK CEMETERIES

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Matthew Cimitile

In Tampa Bay and across the nation, a number of African American burial grounds and cemeteries have been lost to history: erased, neglected, even paved over and developed on.

Historically segregated, some of these burial grounds were cemented over throughout the 20th century in the name of urban development. Others fell into disrepair because they weren't given the same dedicated resources as other burial grounds or were forgotten as cities grew around them and local communities were displaced.

The African American Burial Grounds & Remembering Project seeks to recover and reimagine the forgotten history of these sacred places in Tampa Bay. Consisting of USF faculty, staff, graduate students and community partners from fields such as anthropology, business, English and the arts, the team is working to identify and preserve historical Black cemeteries.

At the same time, a new national network developed by some of these team members is building on the momentum from individuals and organizations who have been working to identify lost burial sites across the nation. The Black Cemetery Network seeks to connect their initiatives and raise awareness about the history and present condition of such sacred places, to ensure what remains is preserved.

THE HERITAGE OF PLACE

"Working with communities and finding out about their heritage, I often find myself in cemeteries," said Antoinette Jackson, professor and chair of the USF Department of Anthropology and principal investigator of the burial grounds project.

To uncover histories that have been marginalized and to share untold stories, the project team is conducting interviews with people associated with local businesses, churches and funeral homes around historical Black cemeteries as well as possible descendants. They are recording oral histories, examining church records and historical archives and working to identify individuals buried. As important, they are starting community conversations on how to best remember the history of such places today.

"Churches and where people are buried give you a feel for what that community is about. With this project, we hope to bring in the living community to learn about the people, families and hometown histories associated with these cemeteries and the surrounding community to better understand the heritage of place," Jackson explained. The project is initially focused on Zion Cemetery, one of the first African American cemeteries in Tampa Bay, located beneath roads, warehouses and a public housing complex just north of downtown Tampa, and St. Petersburg's Oaklawn, Evergreen and Moffett cemeteries, which lie under parking lots at Tropicana Field and under a federal highway. The team will use their research to produce the first digital story map focused on these local African American cemeteries that combine oral histories, photographs, videos and archival information.

SAV. N. SILF

"The Black Lives Matter movement created greater awareness about stories that are usually overlooked that we need to be telling," said Julie Armstrong, a co-principal investigator on the project and a professor of English at USF's St. Petersburg campus. "Black lives matter when they are alive and also when they are dead and recalling those who came before is important."

Phase two of the project will actively engage the community on how these sites should be remembered and what they would like to see in these spaces, from historical markers to local history programs. An aspect of this work includes partnering with performance artists, such as spoken word poet Walter Jennings, who will help tell the story of the burial grounds and the community of people who inhabited these places through art, poetry and photography to engage the public emotionally.

With additional funding and partnerships, phase three of the project will expand the focus to other lost cemeteries throughout the Tampa Bay region.

"An alliance has already formed of those working on cemetery sites in the region and sadly we are finding that there is no shortage of potential lost cemeteries," Jackson said.

The group's work is particularly urgent, because both the historical Zion and Oaklawn cemetery sites are slated for potential redevelopment. Research team members hope findings from the project could influence city planning activities and development discussions.

"This was a social injustice that took place in our country," said Kathy Arthur, a co-principal investigator on the project and a professor of anthropology at USF's St. Petersburg campus. "By listening to those who have been impacted, by creating oral histories, we can bring some healing to this injustice and create spaces that draw people together for remembrance."

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BRINGING TOGETHER THE COMMUNITY

The emergence of the Black Lives Matter movement also began a groundswell for recognizing, documenting and preserving historical Black places, such as cemeteries, across the nation. In 2018, the African-American Burial Grounds Network Act was introduced in the U.S. House of Representatives. And last year, Florida Gov. Ron DeSantis signed a bill establishing a committee that will further investigate Florida's forgotten African American cemeteries.

"The state of Florida is taking a lead on this issue, and universities such as USF are really putting an emphasis on this type of work to ensure such cultural and historic places are not forgotten," Jackson said.

The Black Cemetery Network, founded by Jackson

and her team, will play a key role in channeling this energy and bringing together those involved in this work. It consists of a virtual archive and

By listening to those who have been impacted, by creating oral histories, we can bring some healing to this injustice and create spaces that draw people together for remembrance.

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map of historical Black cemetery sites, a research portal and a news and advocacy hub.

The goal is to connect the expertise of people and communities associated with erased cemeteries and forgotten histories in order to create a living archive. The network will provide valuable information to educate the public and further research and advocacy endeavors.

The network and website launched on June 15. Individuals and groups working to identify and preserve lost burial sites can submit their historical Black cemetery to the network and have it archived on the website. Organizers say there are likely tens of thousands of such cemeteries across the nation.

"There are many individual projects and people who are already working as Black cemetery site advocates," said Kaleigh Hoyt, a USF anthropology doctoral student and creative director and

research assistant for the Black Cemetery Network. "Through the network they can help us visually represent the issue of Black cemetery erasure and show the scope of the problem in a national context."





The project team meets at the parking lot at Tropicana Field, the historical site of St. Petersburg's Oaklawn, Evergreen and Moffett cemeteries.



MAKING TAMPA BAY A HUB FOR FINTECH

Matthew Cimitile

In recent years, the financial world has witnessed the emergence and expansion of online banking systems, crowdfunding platforms and cryptocurrency exchanges.

FINTECH

These are all examples of fintech, a catchall phrase for the merging of technology into financial services. Seeking to harness more startups in the field to create even greater innovation in the years to come, a multi-year partnership between the University of South Florida Muma College of Business and Tampa Bay Wave has launched the FinTechlX Accelerator.

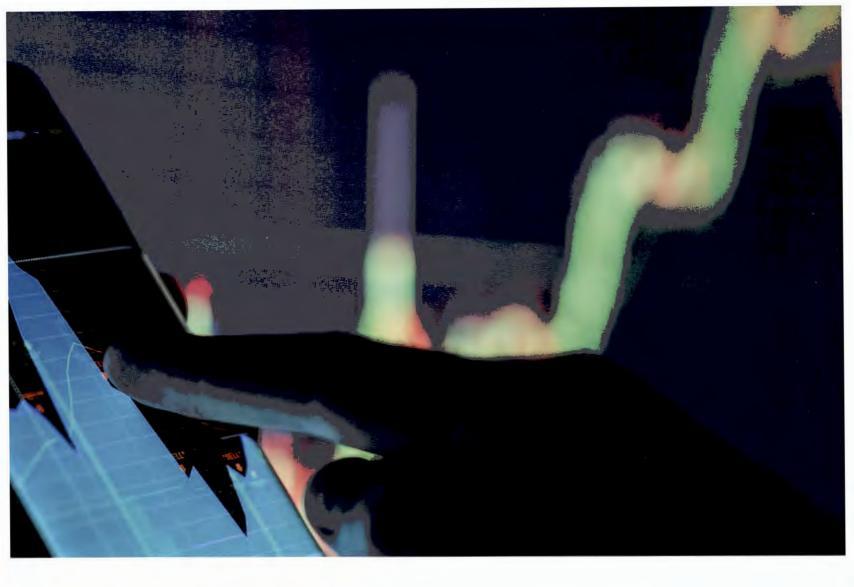
The accelerator is designed to assist high-potential, high-growth startups in the financial technology industry through mentoring, pitch coaching and investment training. The overall goal is to transition startups to sustainable, scalable and profitable businesses. The first cohort of the program will be selected in 2022.

"The fintech accelerator will allow our campus to play an active role in the growth of fintech across the Tampa Bay region," said Gary Patterson, interim director of the Kate Tiedemann School of Business and Finance, which is one of six schools within the Muma College of Business. "We are excited to see the new ideas and companies this accelerator generates and what it offers the industry." Along with supporting aspiring fintech businesses and entrepreneurs, the accelerator seeks to make the region a hub for fintech startups and talent. The bulk of the in-person programming and signature events will take place on USF's St. Petersburg campus and other venues around the region, highlighting Tampa Bay's strong financial industry presence and expertise while exposing the local business community to emerging technologies and business models impacting the financial industry.

"This is the first step toward a bigger vision for establishing the Kate Tiedemann School of Business and Finance and this region as a hub of excellence in this exciting field," said Moez Limayem, the Lynn Pippenger Dean of the Muma College of Business.

The accelerator began accepting applications on January 1, 2022, from startups around the world. Like all of Tampa Bay Wave's accelerator programs, startups selected for the cohort participate at no cost and without giving up equity in their companies. Beyond the 90-day program, companies completing the accelerator have access to an additional six months of mentoring and other resource support at no cost.

"The new FinTechIX Accelerator is being created to address the growing demand for innovative fintech solutions and talent by local finance



industry giants and the greater Tampa Bay region," said Tampa Bay Wave CEO Linda Olson. "I'm incredibly proud of our longstanding partnership with USF that continues to promote greater startup density and high wage job creation in Tampa Bay."

The 90-day accelerator will begin in mid-April, with signature events planned for June of 2022. Entrepreneurs will receive several weeks of classroom training, virtual education opportunities and one-on-one mentor guidance as their business grows beyond the startup stage. At the conclusion of the program, cohort companies will also participate in a private Demo Day event to a room full of accredited investors and venture capitalists.

"This program embodies St. Petersburg's Grow Smarter strategy by focusing on the intersection of financial services and technology," said J.P. DuBuque, President & CEO of the St. Petersburg Area Economic Development Corporation. "We're seeing that nearly all financial service companies in our market are either significantly leveraging technology or are truly fintech companies. FinTechIX will allow us to showcase our thought leadership in the space and attract innovative entrepreneurs and growing companies to our region." The fintech accelerator will allow our campus to play an active role in the growth of fintech across the Tampa Bay region.

ENVIRONMENTAL AND OCEANOGRAPHIC Sciences center of excellence

USF TO LAUNCH NEW CENTER OF EXCELLENCE IN ENVIRONMENTAL AND OCEANOGRAPHIC SCIENCES ON THE ST. PETERSBURG CAMPUS

Carrie O'Brion

The University of South Florida is seeking support from the Florida Legislature and the local community to advance a bold new plan for an interdisciplinary center of excellence that will harness the collective power of colleges and departments from throughout the university to address the existential challenges created by climate change, including sea level rise, high tide flooding events and other coastal hazards.

The center will be located on USF's St. Petersburg campus and will build on the world-class reputation of the College of Marine Science. It will bring a variety of new undergraduate and graduate programs to the St. Petersburg campus and is envisioned as a national destination for students and researchers studying issues related to the environment, oceanography and sustainability.

"Our vision is to build upon St. Petersburg's identity as a vibrant cultural center of thought leadership, businesses, STEM and the arts and become a global destination on the leading edge of the blue-green economy," said Martin Tadlock, regional chancellor of USF's St. Petersburg campus.

At the heart of the plan is a proposed new building, called the Environmental & Oceanographic Sciences Research & Teaching Facility. The \$80-million project would provide state-of-the-art research and instructional space for both graduate and undergraduate students from the College of Marine Science, College of Arts and Sciences and the College of Engineering.

The facility will also house the Florida Flood Hub for Applied Research and Innovation, which was proposed by Florida House Speaker Chris Sprowls and approved by the legislature in 2020. The Flood Hub will establish a home base of expertise in coastal resiliency that will serve the entire state of Florida, with scalable impact for other coastal communities nationwide.

The building would serve as a hub for researchers studying the effects of sea level rise, high-tide flooding events and other environmental issues in ways that are accessible to policymakers, planners, elected officials and the general public. In addition, a new data visualization center is envisioned to provide information that improves forecasting models, helps identify flooding hazards, and assess their economic impact.

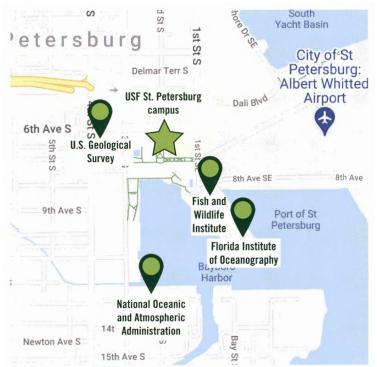
USF is seeking public education capital outlay (PECO) funds during the upcoming Florida legislative session to start immediate construction on the building. The total cost of the project is estimated at \$80,343,461. Of that total, \$60,257,596 will come from the state and \$20,085,865 will come from USF, as recommended by the Florida Board of Governors.

"This building is the springboard we need to launch a constellation of cross-cutting programs that empower USF to face today's grand challenges with innovation, dialogue and resiliency," said Tom Frazer, dean of the College of Marine Science.

The funds, if secured, would be used to demolish the northwest wing of the existing Marine Science Complex at 830 1st St. South

in St. Petersburg. The wing will be replaced with a new four-story addition, and the remainder of the 80-year-old complex would be remodeled to accommodate research labs, teaching labs and classrooms for new programs.

The center of excellence will expand on existing programs at USF's St. Petersburg campus and the College of Marine Science as well, while providing opportunities for new degrees in coastal and ocean engineering,



Our vision is to build upon St. Petersburg's identity as a vibrant cultural center of thought leadership, businesses, STEM and the arts and become a global destination on the leading edge of the blue-green economy.

science journalism, a blue/green MBA (a master's of business administration focused on sustainability and marine science-related businesses) and environmental chemistry.

When fully funded, the new facility is expected to generate tens of millions in economic impact per year.

The facility will be in an ideal location in the city's Innovation District, which is home to the largest collection of marine science, oceanographic and environmental research agencies and institutions in the Southeast. The district includes the regional headquarters for the National Oceanic and Atmospheric Administration (NOAA); the U.S. Geological Survey (USGS) Coastal and Marine Science Center; the Florida Fish and Wildlife Research Institute; the Florida Institute of Oceanography; and the U.S. Coast Guard, among others. Altogether, more than 1,900 marine science-related employees work in the .83-square-mile district.

Jason Mathis, CEO of the St. Petersburg

Downtown Partnership, said the members of his organization are supporting the initiative and that it will be an important project for both the local economy and the entire state. The St. Petersburg City Council has also unanimously passed a resolution expressing its support.

"This will be a game changer, not just for USF and our Innovation District, but for the way we think about managing rising oceans and flooding and severe weather in coastal communities," Mathis said. "Research from this facility will help shape the insurance industry, environmental engineering, zoning and real estate development decisions. It will make our cities more resilient and connect the many different marine science elements that are already part of this campus."

The location is also fitting, given the Tampa Bay region's vulnerability to storm surge from hurricanes and other flooding events. A Boston-based firm that analyzes potential catastrophic damage estimated that the region would lose \$175 billion if it were struck by a storm the size of Hurricane Katrina. In addition, a World Bank study named Tampa Bay one of the 10 most at-risk areas in the world from damaging floods.

"We live in place where more than 30 percent of the county is in the coastal high hazard area," Tadlock said. "Bringing together all of the resources of USF dedicated to the environment, sustainability, the water, climate change and sea level rise is extremely important. We want to be the place where anybody who studies in those areas will be attracted to come and help us meet the serious challenges ahead."



NATIONAL MERIT Scholars



USF'S ST. PETERSBURG CAMPUS WELCOMES LARGE, DIVERSE AND ACADEMICALLY GIFTED CLASS IN FALL 2021

Carrie O'Brion

As the world emerged from COVID-19 lockdowns this fall, students returned to the University of South Florida's St. Petersburg campus in earnest, including one of the largest and most academically gifted classes of first-year students in campus history.

St. Petersburg welcomed 763 first-year students in Summer/Fall 2021, a jump of 83 percent from the 418 students last year. The class was also significantly more diverse than the previous year, including an increase of 30 Black students, 81 Hispanic students, 33 Asian students and 28 students who identify as two races or more.

The numbers on the St. Petersburg campus reflect increases at USF as a whole. The incoming group of 6,392 first-year students include a record rise in the number of out-of-state and international students.

The average high school GPA for first-year USF students in the fall cohort is 4.18, with an average SAT score of 1297. The class also includes a record 62 new National Merit Scholars, up from a previous record of 35 in



2020. For the first time, five National Merit Scholars are calling the USF St. Petersburg campus their home.

"The University of South Florida is proud of the size, quality and diversity of our first-year students," USF President Rhea Law said. "It shows that more and more students are able to benefit from USF's outstanding commitment to supporting our students as they pursue their academic and career goals."

National Merit Scholar finalists are chosen out of more than 1.5 million students who started by taking the Preliminary SAT/National Merit Scholarships Qualifying Test during their junior year of high school. Out of that original number, just 7,500 students are chosen to receive the national scholarship. The scholarship program was created by the National Merit Scholar Corporation in 1955 to honor scholastically talented youth and encourage academic excellence at all levels of education.

Winsome Nisbett, coordinator for scholar programs in the Office of Admissions at USF, attributes the increased enrollment of such students to a concerted effort by USF and the State of Florida to bring academic talent to the state. In 2016, the newly created Benacquisto Scholarship Program helped universities recruit students by including merit scholarship benefits for high school graduates who receive recognition as National Merit Scholars.

In addition, it gives USF the ability to recruit students by offering them full tuition waivers, on-campus housing, financial support for textbooks and more. As a result, both Florida and non-Florida National Merit Finalists receive some of the best benefits in the country at USF.

"USF had the best scholarship for national merit. I looked at a bunch of colleges, and they by far had the most generous offer and the best campus too," said Schuyler Jones of Santa Rosa, CA, who is studying Environmental Science. "They had great faculty, and when I came to campus, they wanted to talk to me. I was on a zoom call during the pandemic with Regional Chancellor Martin Tadlock before I even came here."

In addition to Jones, the National Merit Scholar students in the incoming class at the St. Petersburg campus include:

- Ava Selvig, Fargo, ND
- Sahej Raheja, Oviedo, FL
- Liana Howe, Lancaster, PA
- Shayna Dimmer, Kissimmee, FL



"All five are outstanding young people pursuing their hopes and dreams just like their fellow bulls, and who have come here because of our academic reputation, the campus size, the opportunities for engaging in the community and the sense of place," Tadlock said. "When five National

Merit Scholars choose this campus for the first time in our history, I believe their choice reflects the visibility that comes from being a distinctive destination campus of a highly ranked research university."

These positive enrollment trends also impacted the Judy Genshaft Honors College on USF's St. Petersburg campus, which saw a jump of more than 50 percent for the 2021-22 academic year.

Nearly 150 students on the campus are in the prestigious college that provides an intimate, discussion-based learning experience with greater experiential and research opportunities. Overall, the Honors College across all three campuses experienced an eight percent growth in enrollment and saw increases in average GPA and test scores.

"The biggest reason for the substantial jump

was the larger pool of students coming in with higher scores," said Thomas Smith, associate dean of the Honors College and professor of Political Science on USF's St. Petersburg campus. "The incoming first-year cohort make up 67 of the 144 total students now enrolled, more than double the biggest number we ever had from an incoming class."

The Judy Genshaft Honors College admits students who have a 4.0 GPA or higher and SAT scores of 1370 or higher.

Learning about different perspectives is really important. It can help you solve problems in new ways and it will help me be able to adapt to challenges in the future. Along with small interdisciplinary classes across a wide range of academic disciplines, benefits for students include study abroad scholarships, internship and community service opportunities and an intensive research experience.

"Going into college, I had no interest in research, but I took an honors biology class my first year and I got hooked on phage [viruses that only infect bacteria] and it eventually led me to a summer internship in Dr. Mya Breitbart's Lab in the College of Marine Science," said Paige Boleman, a senior biology major going into her fourth year in the Honors College. "That class changed the course of my studies entirely."

Boleman credits the Honors College's interactive classes for allowing her to think

more deeply and come at course material from a variety of viewpoints in order to contribute to classroom discussions.

Smith added that this diversity of thought, which stems from the diversity of backgrounds and academic majors found in the Honors College, is a major strength and reason why students choose to enroll.

"When you have kids from the northeast and the heartland and Florida in the same class, it brings a different perspective on the world and intellectual friction that exposes students to ideas they are not familiar with," Smith said.

Nearly 40 percent of incoming students enrolled come from outside of Florida, comprising 17 states. Three students hail from overseas - Japan, Sri Lanka and Pakistan - marking the first time international students are part of the Honors College on the St. Petersburg campus.

"I chose USF and the St. Pete campus and the Honors College because of affordability, location and small classes," said Sho Ishizuka, a first-year student from Japan. "St. Pete is just a beautiful place and I love the environment around the campus. And the Honors College provides even smaller classes, which I learn best from by getting to know teachers better

and having more discussion-based classes where I can learn from others in the classroom."

Ishizuka, who is also a U.S. citizen, plans to major in either Accounting or Finance. But what really motivated him about the Honors College was being in classes with students from different majors and perspectives. "Learning about different perspectives is really important. It can help you solve problems in new ways and it will help me be able to adapt to challenges in the future," Ishizuka said.

Though the number of students in the Honors College on the St. Petersburg campus has grown over the years, Smith says the focus is still on maintaining as intimate an educational setting as possible. He is also developing, and wants the Honors College on the St. Petersburg campus to be known for, destination programming that aligns with the character of the city and will attract students with interests in fields of study such as pre-law and marine biology.

"We have an accelerated program for students to get into the law program at Stetson University College of Law and an arrangement where a Law professor from Stetson teaches a class on campus," Smith said. "And we plan to focus on Marine and Environmental Science and connect students with the organizations and expertise in that area found throughout our region."

"

When five National Merit Scholars choose this campus for the first time in our history, I believe their choice reflects the visibility that comes from being a distinctive destination campus of a highly ranked research university.





REDUCING RELATIONSHIP CONFLICT DURING THE PANDEMIC

EXPRESSIVE WRITING REDUCES RELATIONSHIP CONFLICT AND AGGRESSION

Matthew Cimitile

Romantic conflict is known to have escalated during the COVID-19 pandemic. Lockdowns prevented people from working at the office, meeting friends at restaurants and traveling. Fear and uncertainties about jobs, health, finances and the future seeped into how partners interacted with one another.

A survey conducted early in the pandemic and published in the Journal of Sex & Marital Therapy found that 34 percent of participants in relationships had increased conflicts due to the spread of COVID-19 and quarantining measures. Other research indicates lockdowns exacerbated domestic violence nationally and internationally.

Those findings prompted Lindsey Rodriguez to explore potential strategies couples could use to reduce conflict during challenging times.

The associate professor of psychology led a survey of 716 American adults across the U.S. and at the height of the pandemic lockdowns to find out if writing about relationship troubles from the point of view of a neutral observer would result in less conflict and aggression towards one's partner.

Participants, who were divided equally among males and females and all cohabiting with their partner, were asked to fill out a baseline assessment

to measure the frequency, duration and intensity of conflicts in the relationship, followed by a brief writing exercise.

Some individuals were asked to write about a recent disagreement in their relationship from the point of view of a neutral third party who had the couples' best interest in mind, such as a mutual friend. These individuals were asked to use this perspective while interacting with their partner in the coming weeks.

Another cohort was asked to express their deepest thoughts and feelings about problems in their relationship or with another person, while others were told to write about mundane tasks like laundry, house cleaning or lawn care. Two weeks later, participants completed an assessment asking about recent relationship events with their partners.

Results showed that those who wrote about disagreements with their partner from the point of view of a neutral third-party reported fewer disagreements, fewer aggression events and lower levels of conflict intensity and severity relative to the control groups.

"Writing from a neutral standpoint allowed individuals to reframe their thoughts about the disagreement, opening up a new way for people to process the event in a more objective light," Rodriguez explained. "It allows

people to move beyond thinking about why they are right and their partner is wrong and instead places what is often a small disagreement into the perspective of the entire relationship."

Findings show support for a brief and cost-effective strategy that can help couples mitigate some of the negative interactions that have arisen due to the pandemic.

Consistent with the time data was collected, participants in the study reported arguing over finances, parenting

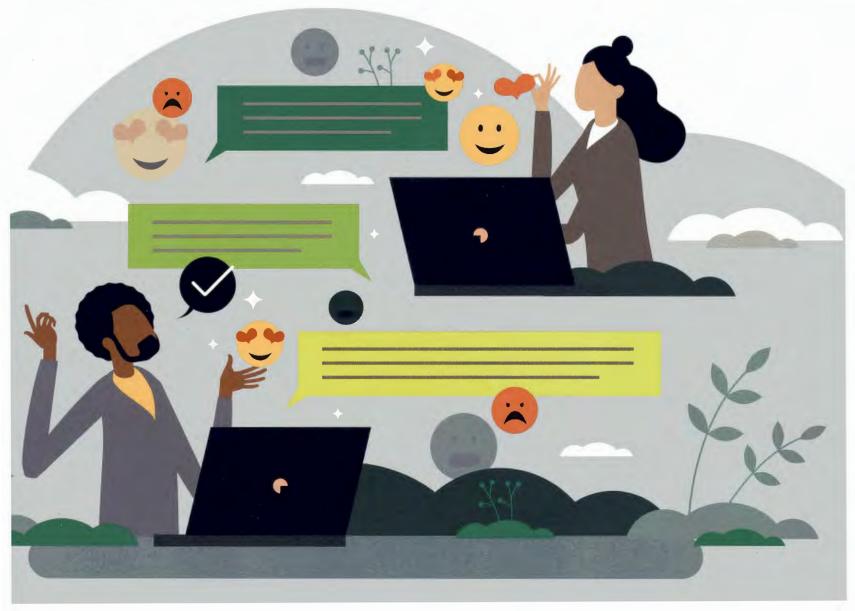
and substance use as well as how to handle COVID-19 safety precautions such as whether to wear a mask or stay home. Being locked at home for extended periods of time contributed to heightened disagreements and, in some cases, violence. "Couples being stuck indoors together under tremendously stressful conditions can be a dangerous combination with the potential for domestic violence," Rodriguez said.

Though this research and its findings are tied to relationship conflicts during the pandemic, the introspective exercise can be helpful for

Couples being stuck indoors together under tremendously stressful conditions can be a dangerous combination with the potential for domestic violence. couples in any context dealing with romantic difficulties. The study builds on other expressive writing research that has been shown to produce positive results for people handling difficult situations, excessive alcohol use or anxiety. Rodriguez said that such introspective writing provides people a safe space to gain insights into their own and others' lives.

"When people are asked to discuss relationship problems with their partner, sometimes pride and ego can get in the way of being objective. While talking to a partner about why you might be wrong is really hard to do for many people, especially if it is an emotionally charged topic,"

Rodriguez said. "The practice of doing it within yourself allows for the space to process in ways that might lead to more empathy, understanding and compromise."



ADDRESSING RACIAL JUSTICE

USF'S ST. PETERSBURG CAMPUS AND OTHER HIGHER EDUCATION INSTITUTIONS ADDRESS RACIAL JUSTICE IN THE REGION

Sarah Sell

Nearly a year and a half after protests broke out across the nation in May 2020, the issue of racial justice continues to be in the spotlight. Although work still needs to be done, progress is being made on campuses and in communities.

Higher education institutions are working together to address racial inequalities, and students are helping create awareness and change.

In July 2020, the USF St. Petersburg campus initiated the exploration of a task force to strengthen its commitment to the city and region in the areas of social and racial justice. It resulted in four universities and colleges in Pinellas County coming together to focus on dismantling racial hierarchies in the region.

The consortium includes Eckerd College, Stetson University College of Law, St. Petersburg College and the USF St. Petersburg campus.

The group's initiatives include building a Truth, Racial Healing and Transformation (TRHT) Campus Center and developing a Racial Justice Fellows program that allows students to be involved in the process of racial healing and transformation in their communities.

THE BEGINNING OF A RACIAL JUSTICE CONSORTIUM IN PINELLAS COUNTY

As a consortium that collectively serves more than 40,000 students in the region, the task force addresses racial inequalities in St. Petersburg and Pinellas County.

After working for months to create a shared vision and reaching out to community and campus stakeholders, their efforts were recognized by the Association of American Colleges and Universities (AACU) as one of 78 institutions (and the only consortium) across the nation selected to participate in a summer institute to learn about the TRHT framework and develop an action plan.

The AACU has been partnering with higher education institutions since 2017 to prepare the next generation of strategic leaders to break down racial hierarchies through the TRHT framework developed by the Kellogg Foundation, whose goal is to promote civic engagement and racial equity.

The TRHT Campus Centers implement action plans to move toward the transformative goal of erasing structural barriers to equal treatment and opportunity on campuses, in communities and for the nation around the pillars of the TRHT framework: narrative change, racial healing and relationship building, separation, law and economy.

The consortium sent three members from each institution to the 2021 TRHT Summer Institute, where they participated in capacity-building workshops. The initial goals the representatives worked to develop included how the consortium will:

- Play a pivotal role in racial healing and transformation in St. Petersburg by presenting a collective truth to build a collective future;
- Engage faculty on incorporating issues of race into curricula and providing more truthful narratives about racial history;
- Develop community seminars related to racial justice from a national, state and local perspective and partner with local media;

- Create student opportunities with a racial justice component with community organizations; and
- Engage in legislative and community advocacy around issues that have been identified by community organizations as key to racial progress.

Through their discussions, task force members identified the TRHT framework as a beneficial tool that could help strengthen each campus' commitment to community and inclusion. Each institution had unique circumstances and reasons for wanting to engage in this work.

"I am very excited to work alongside others to create a campus community, city and county that eliminates racial inequalities, becomes a model for educating the community around issues of social justice and social action, and ensures that all USF St. Petersburg campus faculty, staff and students understand, appreciate and live the ideals of an inclusive community," said Martin Tadlock, regional chancellor of USF's St. Petersburg campus.

Meanwhile, Eckerd College is at an inflection point. Founded in 1958, the small, national liberal arts college welcomed a new president in July 2020, whose focus on the institution's future also includes a deeper look at its relationship with the surrounding community.

"When we first learned of the TRHT from our colleagues at the USF St. Petersburg campus, we were awed at the streamlined approach to a subject we have deeply considered in our five-year strategic planning efforts," said Robbyn Hopewell, assistant vice president of communications at Eckerd College. "Eckerd College joined the consortium to attend the Institute and learn about how to turn our current programs addressing racial justice into a resource for our whole community."

> Ultimately, it is our hope that these students will become leaders in our profession, blazing the way forward for a more equitable and just legal system.

Stetson University College of Law joined the consortium with the intention of expanding the work of the Florida Law Schools' Consortium for Racial Justice (FLSCRJ), as well as broadening community collaborations and sharing its expertise around advocacy issues, particularly as it relates to social and racial justice. Judith Scully, co-founder of Stetson's Social Justice Advocacy program and co-chair of the FLSCRJ, hopes to provide law students with legal pro bono and community service opportunities with community organizations that are working on issues related to racial justice and the law, including issues regarding economics, policing, housing, environmental justice and/or public education.

"A TRHT Center could also provide training for our students and the community

on how to have difficult conversations about race, provide opportunities for us to learn about the legal racial history of St. Petersburg and to connect our legislative advocacy work as part of the Florida Law Schools' Consortium for Racial Justice to community advocacy," Scully added.

St. Petersburg College's goal is to strategically align current diversity, equity and inclusion practices with other local higher education institutions.

"SPC is committed to serving as a leader, convener and catalyst for positive change and our partnership with the TRHT center will connect and enhance resources that cultivate healing and learning," said Tashika Griffith, provost for the SPC Downtown and Midtown Center. "The establishment of a TRHT Center will assist with ensuring all stakeholders have an opportunity to thrive in an environment that fosters inclusive growth," she added.

"While each institution has been making positive steps to identify and address gaps in equity and elevate minority voices, the TRHT framework presented a way for each institution to streamline a shared process and unify fragmented strategies across campuses," said Michelle Madden, USF St. Petersburg's campus diversity officer.

"The consortium provides the opportunity to do this work more intentionally and deeply both internally among our students, faculty and staff and externally in the community to further the work of racial healing and equity transformation," she added.

Outside of the four higher education institutions, the consortium has received support from community members and organizations, such as the Foundation for a Healthy St. Petersburg, which provided a local planning grant.

"Foundation for a Healthy St. Petersburg supports the work of the consortium and believes the implementation of the TRHT model will transform longstanding institutionalized systems rooted in racism," said Carl Lavender, chief equity officer for the foundation. "The prospective framework for discovering truths about racial harm, jointly working to heal resulting trauma and supporting the role of higher education to uplift the narrative and voices of Black, Indigenous and people of color will yield multiple pathways to collectively manifest race equity within the consortium and community-at-large."

THE CONSORTIUM CREATES THE RACIAL JUSTICE FELLOWS PROGRAM

Together with the Foundation for a Healthy St. Petersburg, the organizations formed St. Pete/Pinellas Higher Education for Race Equity (SPHERE) consortium.

One of the goals was to create a Racial Justice Fellows program aimed at putting the college students at the center of creating systemic racial change. Eight students were selected to participate in the pilot program. Two from each institution will receive up to \$2,000 during the 2021-2022 academic year and will work with the consortium to develop the TRHT center for Pinellas County.

"The idea for the fellowship started because we wanted to have a strong student voice through the process of creating a consortium for higher education focused on racial justice," said Caryn Nesmith, director of community relations at USF's St. Petersburg campus.

The fellows will learn about shaping policy and systems through a racial justice lens. They will also discuss the mechanisms that enable racial healing and work on projects that support racial healing and transformation.

Over the course of the academic year, students must participate in seven approved activities, events or discussions related to race equity and racial justice. Students will find and complete a six-week internship in summer 2022 that focuses on deepening their understanding of the impact

of systemic racism and influential opportunities to drive healing and transformation.

"It is our hope that the Stetson law students involved in this fellowship will develop a deep commitment to diversity, equity and activism with a keen understanding of the need for cultural humility in our society," said Scully, who also serves as a law professor. "Ultimately, it is our hope that these students will become leaders in our profession, blazing the way forward for a more equitable and just legal system."

"Eckerd students already have a strong desire to make a positive impact on the world," added Beverly Warren, executive director of inclusive excellence at Eckerd College. "We hope that this fellowship will provide them an opportunity to develop into conscious leaders who understand the challenges to and importance of working toward racial equity and inclusivity within our campus and surrounding community."

"SPC students represent a wide array

I am very excited to work alongside others to create a campus community, city and county that eliminates racial inequalities, becomes a model for educating the community around issues of social justice and social action, and ensures that all USF St. Petersburg campus faculty, staff and students understand, appreciate and live the ideals of an inclusive community.

SPHERE ANNOUNCES INAUGURAL COHORT OF RACIAL JUSTICE FELLOWS

In October, SPHERE selected its inaugural cohort of Racial Justice Fellows for the 2021-2022 academic year.

In their applications, candidates were asked to answer questions about how their life experiences shaped their interest in working on racial justice and equity and how they would lead systemic change and antiracist policy movements on their campus and in their communities.

The eight students selected include Trey Daniels and Kayla Rendon-Torres from Eckerd College; Audrie Brinegar and Na'Keidra Perez from SPC; Blake

Radford and Megan Holmes from Stetson University's College of Law; and Aaron Rose and Destiny Gomez from the USF St. Petersburg campus.

"I want to be a public service lawyer who offers pro bono services to at-risk communities," said Brinegar, a History major at SPC. "This fellowship position will help shape my career."

Fellows will participate in biweekly planning meetings with consortium institution representatives to help shape the vision, goals and activities of the TRHC Center for Pinellas County. This will include participating in other meetings at their home institutions as well as engaging with community members.

"I know that this fellowship will shape my journey and career because I am a global business major," said Rose, a global business major at the USF St. Petersburg campus. "I have to study abroad and meet people from all over due to my major, and I feel that this will help me become more open to

of diverse backgrounds and perspectives," Griffith said. "Through the fellowship, our hope is that students will gain the knowledge and tools to actively engage in equity, diversity, inclusion (EDI) efforts and see themselves as a part of, and not apart from, the work that is needed to move EDI forward."

In addition to launching the Racial Justice Fellows program, the consortium is working toward other shared goals, including creating a professional learning community for faculty on incorporating issues of race into curricula and providing more truthful narratives about racial history while developing community seminars related to racial justice from a national, state and local perspective. different perspectives and views in life."

"As an aspiring civil rights defense attorney, I would like to do as much as I can to spark change while being a student," said Daniels, a political science major at Eckerd College. "This opportunity will give me hope that I am being a strong advocate for the people in my community that I believe need me the most."

"I feel like through this amazing opportunity, I would network with many individuals that would be assets to implementing my dreams for this nation," said Destiny Gomez, a psychology major at USF. St. Petersburg campus. "I am eager to correspond with like-minded individuals that share my same passions and have the same fire burning within them."

Kayla Rendon-Torres - Eckerd College - Animal Studies and Environmental Studies Major

"By participating in this fellowship, my efforts to support each and every community will blend into the work I do today as a program manager of the Office of Diversity, Equity, Inclusion, and Belonging (DEIB) as well as my role as DEIB coordinator for the Eckerd College Search and Rescue (ECSAR) team."

Na'Keidra Perez - St. Petersburg College Paralegal Studies

"I believe this fellowship will shape my leadership journey and my career by not only giving me the tools and education necessary to set out to close the wealth gap racial divide but it will also allow for many networking opportunities to get my ideas in front of likeminded individuals who can further develop my talent and principles."

Megan Holmes - Stetson University's College of Law - Juris Doctor Candidate, B.A. in Political Science and Pre-law

"I came to law school interested in learning how to solve big, intractable problems, specifically those surrounding racial equity. I believe that this fellowship is the perfect next step in my careerlong commitment to that cause. This fellowship will provide the opportunity to build a consortium that outlasts my time at Stetson."

Blake Radford - Stetson University's College of Law - Juris Doctor Candidate, B.A. in Political Science, Psychology

"If I want to help end racism and change the environment my cousins will have to grow up in, I need to learn from more enlightened and experienced minds on the tools they've used as well as what they have found in their experience to work and not work. I believe this fellowship will give me an opportunity to learn, experience, and discuss the situations we face and have a hand in trying to fix some of the issues. The potential to work with other fellows from various academic institutions and with more experienced individuals who can impart their knowledge onto me will undoubtedly grant me a vast array of experience that I can learn from and implement into my leadership style and take forward with me on my journey."

BOBERT BUBERARD

'FATHER OF ENVIRONMENTAL JUSTICE' HELPS BRING AWARENESS TO ISSUES OF CLIMATE IMBALANCE

Carrie O'Brion

Professors Rebecca Johns and Barnali Dixon are working to ensure their research on the growing threat of climate change and sea level rise connects with the audiences who would benefit most: people from diverse neighborhoods in lower socioeconomic income brackets.

So when the pair planned their annual workshop for the Initiative on Coastal Adaptation and Resilience (iCAR), Dixon floated an ambitious plan: Why not invite Robert Bullard, one of the nation's premier experts on environmental and climate justice, to be the keynote speaker?

"I said, 'You'll never get Dr. Bullard!'" Johns recalled, laughing. "It will never happen. But if you really want me to, I'll try.'"

Johns' concerns turned out to be unfounded. Bullard, who is often referred to as the father of environmental justice, not only agreed to present the keynote address at iCAR, he also worked with USF researchers and local community leaders to identify the most pressing climate-related issues they face.

It's all part of the vital mission of iCAR, which aims to help the local community prepare and become more resilient to future environmental changes. It was co-created in 2014 by Dixon, professor of geographic information systems and remote sensing, and Donny Smoak, professor of Geochemistry. Johns, an associate professor of Geography, soon joined as director of community outreach and education, and the organization began hosting annual workshops in 2015.

This year's workshop was titled "Climate Justice, Social Networks and Equitable Resilience." In addition to Bullard's presentation, the twoday event featured panel discussions with researchers and experts who explored the unique vulnerabilities and needs of diverse neighborhoods when it comes to coping with climate-related disasters.

As Bullard explained in his hour-long talk, the problems created by climate change are already causing a crisis in poorer and more diverse communities throughout the United States.

"Climate change is more than parts per million in greenhouse gases," Bullard said. "It's also about justice. We're talking about protecting the most vulnerable populations. And in major disasters, the most vulnerable communities and populations generally suffer the earliest and most damaging setbacks because of where they live, their limited income and economic means, and their lack of access to health care."

"Climate justice" is a term that acknowledges climate change is disproportionately impacting low-income communities, people of color, indigenous people, people with disabilities and the very old or very young. Advocates for climate justice call for these inequities to be addressed through long-term mitigation and adaption strategies.

According to a recent report by the U.S. Environmental Protection Agency (EPA), Black people are more than 40 percent more likely to live in areas with the highest projected increases in extreme temperature related deaths. Hispanic and Latino people are 43 percent more likely to work in places where high temperature days will cause them to lose work opportunities. Native Americans are 43 percent more likely to live in places that will be flooded due to sea level rise.

"Climate change will exacerbate these regional inequities, including those health inequities that exist in the United States, and will worsen the vulnerabilities of already marginalized communities." Bullard said. "When we talk about how climate change will widen the gaps between the haves and have-nots, ZIP code is still one of the most powerful predictors of health and well-being. You tell me your ZIP code, I can tell you pretty much how healthy you are, and the quality of your life."

Bullard is currently the distinguished professor of Urban Planning and Environmental Policy at Texas Southern University. He is an awardwinning author of eighteen books that address a plethora of environmental and societal issues, from sustainable development and urban land use to housing, transportation and regional equity. Bullard is also co-founder of the Historically Black Colleges and Universities (HBCU) Climate Change Consortium.

Bullard's talk was the centerpiece of the seventh iCAR Workshop.

The workshop began with a town hall meeting in the garden of the Carter G. Woodson African American museum, where community residents were invited to provide feedback regarding their most pressing concerns related to climate change. Examples range from lost wages due to hurricanes, to street flooding, to air quality.

"It ties back to the original mission of iCAR," Dixon said. "We wanted to foster equitable resiliency based on informed decision making. The policies should be guided by the data and information and research. But at the same time, we want to develop the research agenda from the grass roots."

Participants were also provided with a QR code, a digital link to access information from their smart phones that will help prepare and recover from a major storm.



We're talking about protecting the most vulnerable populations. And in major disasters, the most vulnerable communities and populations generally suffer the earliest and most damaging setbacks because of where they live, their limited income and economic means. and their lack of access to health care.

"One of our goals has always been to leverage the resources of the university to make those more accessible to marginalized communities," Johns said. "We know there's a big divide between academia and poor, Black and working-class communities. We've been trying for years now to try to break some of those walls down and make some of these resources available."

The iCAR workshop featured a presentation on the Community Resiliency Information System (CRIS), which was designed to "make smart cities smarter" by allowing residents from diverse communities to communicate their resources and information needs to decisionmakers. CRIS fosters transparency and communication between government officials and the communities they represent. Non-governmental organizations (NGOs) can also review the data from CRIS and provide mission-specific services, which can build greater resiliency. Dixon and Johns were awarded a grant from AT&T to establish a preliminary platform in St. Petersburg's Childs Park neighborhood.

The workshop also included a presentation on the Florida Flood Hub for Applied Research and Innovation, which was created by the Florida Legislature and will be based at USF's College of Marine Science. The new center will generate research on the effects of sea level rise, hightide flooding events and more in formats that will be accessible to policymakers, planners, elected officials and the general public.

Johns and Dixon say their hope is to keep the community engaged throughout the year to spread awareness and help facilitate the adoption of policies and practices focused on coastal adaptation and resilience, particularly in underserved neighborhoods.

"We want to start with the grass roots," Dixon said. "The people who have the least say and the community who doesn't normally have time or access to the process, that's who we want to reach."

INTERNATIONAL RECOGNITION

FROM THE KING OF SPAIN TO GOVERNOR OF FLORIDA, PROFESSOR LAUDED FOR WORK TRACING FLORIDA'S EARLIEST HISTORY

Carrie O'Brion

In a room decorated with 18th century tapestries and oil portraits of long-deceased monarchs, a group of dignitaries, friends, and family members gathered to watch as the Spanish ambassador to the United States pinned a red-enameled cross with a golden frame to the lapel of USF History professor J. Michael Francis.

With that gesture, Ambassador Santiago Cabanas inducted Francis into the Order of Isabella the Catholic, one of Spain's oldest and most prestigious civil orders, whose membership includes world-renowned artists, poets, scholars and diplomats.

As he addressed the small crowd at the reception held for him at Cabanas' private residence in Washington, D.C., Francis, the Hough Family Endowed Chair of Florida Studies at USF's St. Petersburg campus, was momentarily overcome with emotion. "Historians are never speechless," Francis said. "And I'm speechless. I am beyond humbled by this honor."

While Francis has been recognized many times for his work tracing the early Spanish roots of Florida history, 2021 was a notable year for him and the colleagues who have collaborated with him on his research. In addition to being named to the order of Isabella the Catholic, Francis was also appointed to the Florida Historical Commission by Florida Gov. Ron DeSantis.

Francis will serve a two-year term on the Commission. He will review grant applications, vote on proposed nominations to the National Register of Historic Places and advise the Florida Division of Historical Resources concerning policy and preservation needs.

"Professor Francis has done remarkable work to shine a spotlight on Florida's early Spanish history. We are all very pleased to see him honored," said Martin Tadlock, regional chancellor of USF's St. Petersburg campus. "This recognition is important to everyone on this campus as well as in the state of Florida. It demonstrates our commitment to supporting our faculty and their world-class research, and it also reflects the value of that research to the citizens of this state."

The recognition from Spain was particularly meaningful, Francis said. Through the years, he has followed the work of other historians who have been inducted into the order but never dreamed he would join their ranks.

"This is certainly the most prestigious honor I've received in my career," he said. "It is an individual honor but one that would not have happened had I not had a lot of other shoulders to stand on."

But due to the remote working situation created by the COVID-19 pandemic, it's an honor that Francis initially missed.

After working from home for several months, Francis visited campus to retrieve mail from his overflowing mailbox. Nestled among the magazines and bills was a letter from the General Counsel of Spain informing him that King Felipe VI had issued a decree on his behalf. Francis would be awarded the Officer's Cross, which signifies a third-class rank in the Order of Isabella the Catholic.

"I had no clue whatsoever!" Francis said, laughing.

Francis quickly got in touch with the ambassador's office, explaining the reason for his lack of response. Then the reception in Washington, D.C. was arranged to present Francis with his medal.

from March 1600 showed that St. Augustine residents gathered together and processed through the streets in honor of the feast day of San Patricio or St. Patrick. As they marched, cannons fired in celebration of the Irish saint.

While Francis has worked collaboratively with the Spanish government many times through the years, he pointed to a few notable initiatives that helped earn him the recognition from King Felipe VI.

In 2013, Francis worked with the Spanish embassy and Spanish consulate to curate a museum exhibit titled "Imagining La Florida: Ponce de Leon and the Quest for the Fountain of Youth," which used interactive

This recognition is important to everyone on this campus as well as in the state of Florida. It demonstrates our commitment to supporting our faculty and their world-class research, and it also reflects the value of that research to the citizens of this state.

Among those attending was George Greenia, a professor emeritus from the College of William & Mary. A specialist in the languages, literatures and linguistics of medieval Spain, Greenia is also the founder of the William & Mary Institute for Pilgrimage Studies. He was inducted into the order of Isabella the Catholic for his work in 2007.

"It is a tremendous honor," Greenia said. "Once you are inducted, it can't be revoked. The Spanish are tying themselves to you permanently. People don't always recognize the significance of that."

The Order of Isabella the Catholic was created in 1815 by King Ferdinand VII with the intent of "rewarding the firm allegiance to Spain and the merits of Spanish citizens and foreigners in good standing with the Nation and especially in those exceptional services provided in pursuit of territories in America and overseas," according to the Spanish ambassador's office. It is open both to Spanish citizens and to foreigners.

Francis serves as the executive director of La Florida: The Interactive Digital Archive of the Americas, an innovative project that combines short videos, interactive maps and digital reconstructions that brings to life the diverse melting pot of people who made up early Spanish Florida. Francis and his team spent years reading thousands of original documents, maps, and images to chronicle the diverse lives and events that formed Florida's earliest history.

Francis earned international attention in 2018 with his discovery that St. Patrick's Day celebrations did not originate in Boston, as previously believed. Instead, they started 100 years earlier in the city of St. Augustine, Florida.

Francis made the discovery from an unlikely source: gunpowder expenditure lists from St. Augustine for the years 1600-1601. An entry

technology to explain the perils of early Spanish exploration and the rich colonial history of Florida.

Two years later, Francis was one of only two historians appointed by the U.S. Secretary of the Interior to serve on the Federal St. Augustine 450th Commemoration Commission, which recognized the history of the nation's first city. Francis wrote a book, "St. Augustine: America's First City, A Story of Unbroken History & Enduring Spirit" for the occasion.

Francis and his team are now working on a new La Florida initiative titled "Europeans, Indians, and Africans: Lost Voices from America's Oldest Parish Archive, 1594-1821." With help from a \$250,000 major initiatives grant from the National Archives, the project will make more than 9,000 handwritten documents from St. Augustine's diocesan archives accessible to a global audience, shining a spotlight on the daily lives of the multiethnic population of Europeans, Africans, and Native Americans who resided in early St. Augustine.

Francis, who has been at USF since 2012, also attributed his success to the ongoing support of the Hough family, who endowed the chair in Florida History that Francis now holds. While the original benefactors, Bill and Hazel Hough, recently passed away, their daughter, Susan Hough Henry, and her husband, Pat, attended the ceremony honoring Francis at the Spanish ambassador's residence.

"I'd like to think that Bill and Hazel were there in spirit," Francis said. "Without the Hough Family Foundation, I don't think this would have happened. I would not have had the kinds of opportunities in terms of working with students and also getting to work so consistently in Spain. The entire Hough family and their commitment to the promotion of Florida history is at the core of all of this."



CAMPUS

NEW POSITION AIMS TO FOSTER GREATER COLLABORATION BETWEEN RESEARCH-INTENSIVE UNIVERSITY AND DYNAMIC CITY

Matthew Cimitile

Back in July of 2021, an innovative partnership between the city, business and university communities created a new position to facilitate greater engagement and collaboration among each.

Caryn Nesmith was appointed USF St. Petersburg campus' first director of community relations, with funding for the role pooled between the campus, city of St. Petersburg, the St. Petersburg Downtown Partnership and the St. Petersburg Innovation District.

The driver for this partnership was the social and economic benefits from greater synergy between a research-intensive university and a dynamic, urban city.

Nesmith comes to the job with a wealth of experience in community relations, having worked as a strategic communications consultant for more than a decade. Most recently, she served as the special assistant to the regional chancellor for strategic initiatives for the past four years.

In that role, she was instrumental in facilitating and coordinating a number of key campus initiatives that have made an impact on students and the community – from a program that connects college students with senior citizens to reduce social isolation to a job-shadowing program that pairs first-year students with professionals to get a head start on exploring career paths.

Those experiences are proving vital for this new position. As the director of community relations, Nesmith is coordinating campus efforts and faculty research to address community needs, while increasing student engagement with community organizations to enhance educational and workforce opportunities.

"I hope this role will integrate the community more fully into the fabric of the USF St. Petersburg campus and vice versa, enhancing prosperity, entrepreneurship and expanding economic opportunities by enabling greater access and innovative ways to collaborate," Nesmith said.

Nesmith discussed a little bit more about her experience, what she has learned on the job so far and her vision for creating more "aha moments" of collaboration between campus and the community in the Q&A below.

WHAT IS THE VALUE OF A DIRECTOR OF COMMUNITY RELATIONS POSITION FOR THE CAMPUS AND THE ST. PETERSBURG COMMUNITY?

I think having this position prioritizes community and shows that we are here to serve the surrounding region. What I have found being in this position for this short amount of time is that there are so many different ways we are engaging. Now to take that one step further, we can do better in coordinating all that engagement and having a centralized access point as well as a conduit for information both ways. That will make us more effective.

WHAT PERSONAL AND WORK EXPERIENCE HAS PREPARED YOU FOR THIS ROLE?

Being a consultant for a dozen years helped me assess situations and think creatively to find solutions. I think this role requires that. Also working in the Chancellor's Office for the last four years gave me a great understanding of the university's work as a whole and how it is integrated and involved in the community.

YOU HAVE BEEN IN THIS JOB FOR ABOUT FIVE MONTHS NOW. WHAT HAVE YOU LEARNED SO FAR?

I've learned that a lot is happening when it comes to our campus and **community** initiatives and programs. We have a really big **empire** when it comes to engagement; for example, we have the Center for Civic Engagement, internship coordinators, the Career Center, the Communications & Marketing Department and Office of Corporate Partnerships. My job is to somehow best corral all that effort to **respond** effectively to community needs and share those resources while being a resource to our campus.

One thing I've learned while giving campus tours to key community leaders where I try to connect them with faculty on campus is that many weren't aware of how dynamic our campus is, or how much high-impact research and programming is taking place that has direct relevance to what they do or are interested in. They almost have this "aha moment" when it's a person-to-person connection on an issue. You can't replace that direct connection.

WHAT DO YOU HOPE TO ACCOMPLISH OVER THE NEXT YEAR THAT WILL STRENGTHEN THE CONNECTION BETWEEN THE CITY, BUSINESSES AND THE UNIVERSITY?

Moving forward, we want to increase opportunities for leaders, organizations, businesses and others to get on campus and connect with our faculty and students. And then take that knowledge that has been learned from those encounters forward and find future areas of collaboration.

I also think it is really important to develop feedback loops; to ensure the **community's** input has been heard and show how that has impacted the future direction of programs and strategic initiatives at the university.



THE CASE FOR CARBS TOOTH PLAQUE FROM A SKELETON DISCOVERED BY ANTHROPOLOGY

PROFESSORS OFFERS NEW INSIGHT ON ANCIENT HUMANS' DIET

Carrie O'Brion

Bayira may be 4,500 years old, but this ancient skeleton is still providing important new insight into what ancient humans ate and how their diet shaped the way our species evolved.

Bayira is the name USF Anthropology professors Kathryn Weedman Arthur and John W. Arthur gave the skeleton, which they unearthed from a cave in the highlands of southern Ethiopia in 2012. The discovery made international headlines after a DNA analysis of the skeleton's ear bone provided researchers with the first ancient human genome completely sequenced from the African continent.

Now Bayira, whose name means "first born" in the Gamo language of the people who inhabit the land where he was discovered, is playing a part in another groundbreaking study, this one focused on the diet of ancient humans and how what they ate affected the evolution of people today. The seven-year study was published in the Proceedings of the National Academy of Sciences and involved the collaboration of more than 50 international scientists. Researchers reconstructed the oral microbiomes – the community of microorganisms, mostly bacteria, found within mouths – of Neanderthals, primates, and humans.

Their goal was to better understand the evolutionary history of the oral microbiome because there is little known about how it developed. Their most significant finding was that one group of bacteria present in both modern humans and Neanderthals is specifically adapted to consume starch.

This suggests starchy foods such as roots, tubers and seeds became important in the human diet long before the introduction of farming. Some researchers believe the transition to eating these starchy foods, which are rich in energy, may have enabled humans to grow the large brains that characterize our species.



"Understanding the role that food played in the evolutionary development

team analyzed billions of DNA fragments in order to identify the long-

of human uniqueness is complicated because many types of food remains — especially plants — are poorly preserved in the fossil record," said John Yellen, director of the National Science Foundation's archaeology and archaeometry program, which supported the research. "This innovative study of ancient bacteria preserved in fossil plaque provides a new and powerful way to understand the evolution of humans and our social and ecological history."

The Arthurs began their anthropological field research in Ethiopia more than 20 years ago. They discovered the skeleton in Mota cave, where it was laid out in a ceremonial burial and surrounded by obsidian tools. Animal and fish bones were also found nearby.

"Since we didn't recover any seeds or any plant material, we didn't know what he ate besides meat," Weedman Arthur said.

Bayira's calcified dental plaque was one of 120 specimens analyzed by the researchers, who come from 41 institutions in 13 countries. The

This innovativestudy of ancientbacteriapreserved infossil plaqueprovides a newand powerful wayto understandthe evolutionof humans andour social andecological history.

dead bacteria and compared it to the oral microbiome of wild chimpanzees, gorillas, and howler monkeys.

The study showed the oral microbiomes of Neanderthals and today's humans are almost indistinguishable. But despite the importance of the bacteria that make up the oral microbiome, they continue to be understudied. Some of the strains discovered during the study haven't even been named. This leaves the door open for more research in the future.

The Arthurs said they're hopeful the skeleton they discovered will continue to contribute to our knowledge of evolution and the human condition. While they've had to put their travel to the Gamo Highlands of Ethiopia on pause because of travel restrictions due to COVID-19, they hope to resume their research in the area soon.

"This little piece of plaque has led to this great

discovery," Arthur said. "And Bayira continues to tell a story."



COMPLEX LIVES OF REPTILES

BIOLOGIST UNCOVERS THE NESTING HABITS AND COMPLEX SOCIAL LIVES OF REPTILES

Sarah Sell

Growing up in Louisiana, Sean Doody loved to explore the woods and catch animals, especially amphibians and reptiles. He would return muddy and bring whatever creatures he found inside the house to study them.

"I used to come home with these giant salamanders that I found in ditches. They look like an eel with tiny feet. I used to bring them home and keep them in an aquarium and feed them worms and things. Visitors either found them really cool or really gross," Doody said.

His fascination with herpetology eventually led to a career in conservation biology. Now an assistant professor and graduate director of integrative biology at the USF St. Petersburg campus, Doody's work has taken him halfway around the world to study poisonous toads and giant lizards.

The ten years of research led by Doody recently revealed that the monitor lizard in Australia should be regarded as an "ecosystem engineer," a rarity for reptiles.

Tortoises and sea turtles were previously the only reptiles considered to be ecosystem engineers, a term used to describe organisms that have a great impact on their environment based on their ability to create, modify, maintain or destroy a habitat.

Doody, along with his colleagues, discovered that in Australia, small animal communities rely on the monitor lizards' burrow system, called a warren, using it as a habitat, a place to forage for food and nesting.

In his study, published in Ecology, Doody and his Australian collaborators investigated the nesting biology of the yellow-spotted monitor lizard, which can measure nearly five feet, and its smaller, sister species, the Gould's monitor lizard. The team had recently discovered that the lizards are unique because they lay their eggs as deep as 13 feet, easily the deepest vertebrate nests on earth. They loosen the soil, creating warm, moist conditions ideal for laying eggs and trapping viable seeds and fruits. But now, the researchers have discovered that the burrows hosted a



wide range of animals, including reptiles, frogs, insects and even marsupial mammals. The team found 747 individual species of 28 types of vertebrates.

The timing of the research revealed clues as to why certain species utilized the warrens. For example, throughout the winter dry season, the researchers found hibernating frogs using the burrows to maintain their body moisture. During one excavation, Doody and his team discovered 418 individual frogs in a single warren.

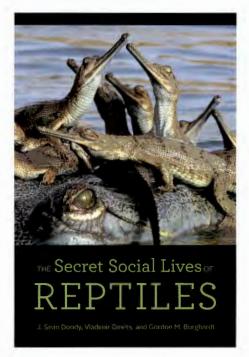
"The finding is significant as it shows that nesting warrens provide critical shelter and other resources for the small animal community," Doody said. "The invasive cane toad is decimating the monitor lizards in some areas, meaning that these nesting warrens, which are re-used year after year, will disappear. This can impact the relative number of predators and prey, which can have unexpected consequences for the ecosystem, such as an overabundance of one species at the cost of another, which in other systems has threatened species with local extinction."

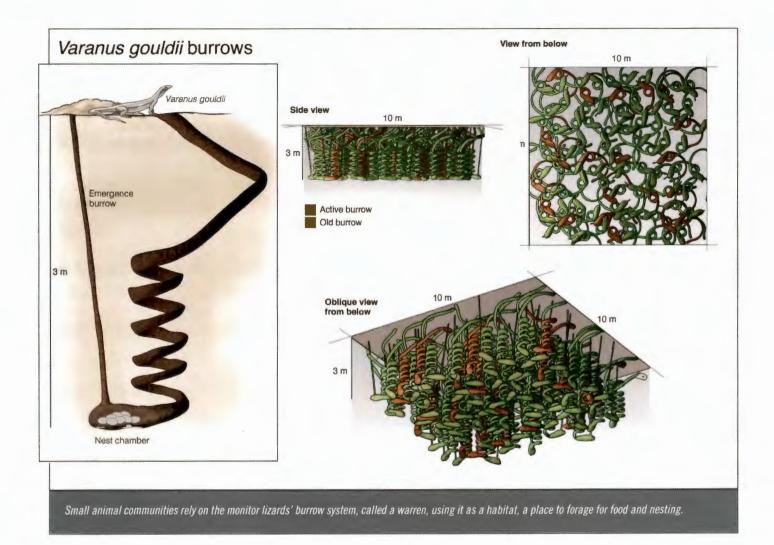
The arrival of the toxic cane toad underscored the extent of the monitor lizard's impact on the food web. In studies conducted between 2009 and 2017, Doody's research team uncovered abandoned burrows and an increase in the **```**

The finding is significant as it shows that nesting warrens provide critical shelter and other resources for the small animal community. lizard's prey, including smaller lizards, snakes, turtles and birds. Australian researchers and natural resource managers have been unable to successfully control cane toads.

Doody is now expanding his research to include the perentie, another large monitor lizard that likely nests at great depths in the Australian desert, to see if it too should be deemed an ecological engineer.

In June 2021, Doody also co-authored a book that combined his current research with classic studies to highlight the secret social lives of reptiles.





"We have to be able to understand them to protect them," explained Doody.

The cold-blooded, scaly creatures are often thought of as solitary, uncaring or asocial. In reality, experts believe they communicate extensively with one another and hunt, feed, court, mate, nest and hatch in groups.

The largely unknown and extensive social lives of these animals is the premise of the new book "The Secret Social Lives of Reptiles," by Doody, Vladimir Dinets and Gordon M. Burghardt, three of the world's leading experts on reptiles.

The book brings together several decades of research from around the world that details the mysterious social lives of non-avian reptiles, including turtles, crocodilians, lizards, snakes and the tuatara, a rare reptile resembling a lizard that is only found in New Zealand. One of the many fascinating pieces of research detailed in the book is Doody's field research involving the monitor lizard.

The three authors have a shared conviction that social behavior in reptiles has been vastly underappreciated. Doody added that they wanted to create a showpiece for the scientific community.

"We tried to read every paper on reptile social behavior. So many of the studies are people painstakingly watching, radio tracking, following and discovering evidence of social behaviors in snakes, turtles and lizards around the world. Personally, I had started to study types of social behavior in reptiles, particularly communal nesting in reptiles, how mothers exchange social information and where they put their eggs," Doody said.

We talked with Doody about his new book and why he thinks people, especially students, should know about the social lives of reptiles.

WHY WAS IT IMPORTANT FOR YOU AND YOUR COLLEAGUES TO WRITE THIS BOOK?

We were discussing how everyone is dismissive that reptiles engage in social behavior because they can't compare to mammals, birds and some

insects like ants. But they can be highly complex socially. So there ended up being a dichotomy where you've got your mammals and birds, which are highly social, and then reptiles are being pigeonholed as non-social when that simply wasn't the case. Also, if we understand how social behavior evolves, we need to understand its fundamental, rudimentary origins. How did it become what it is, complex in mammals and birds, from a reptilian type of ancestor? Understanding the evolution of social behavior requires that we understand it in groups like reptiles.

If you're a student interested in the social behavior of animals, you're going to be drawn to mammals and birds because the reptiles are dismissed as asocial, so you're not going to go there. A bias builds up. They don't know that reptiles are social. We fully realized how little we know about the behavior of reptiles. This book serves to say we need to get back out there and figure things out. We've got a lot of extinctions; biodiversity is on the decline and we're losing species before we even know what they do or did.

WHAT ARE SOME EXAMPLES OF SOCIAL BEHAVIORS IN REPTILES?

Male crocodiles babysit hundreds, sometimes thousands of babies that aren't even their own. So, you have babies on the back of a dad cruising around the lake. A colleague of mine works on this. It's very unusual to



Doody and his research team looking for nests in an excavation pit in Australia.

protect young that aren't even yours, even in things like mammals. It's a very extraordinary social behavior for any animal. They've discovered that the younger males are tasked with this, and those younger males aren't even getting to mate, so it looks like it's a ritual that the young males go through protecting the babies. Then, as they get older, they get to mate with the females. Social behavior can also include courtship, fighting, combat between males for females and any interaction between the same species. For example, one couple of lizards have been meeting every year for 27 years to mate. The sleepy lizard in Australia is seasonally monogamous, so males and females meet and hang out for a few weeks, mate and go their separate ways the rest of the year.

WHAT CAN WE DO TO PROTECT THESE REPTILES?

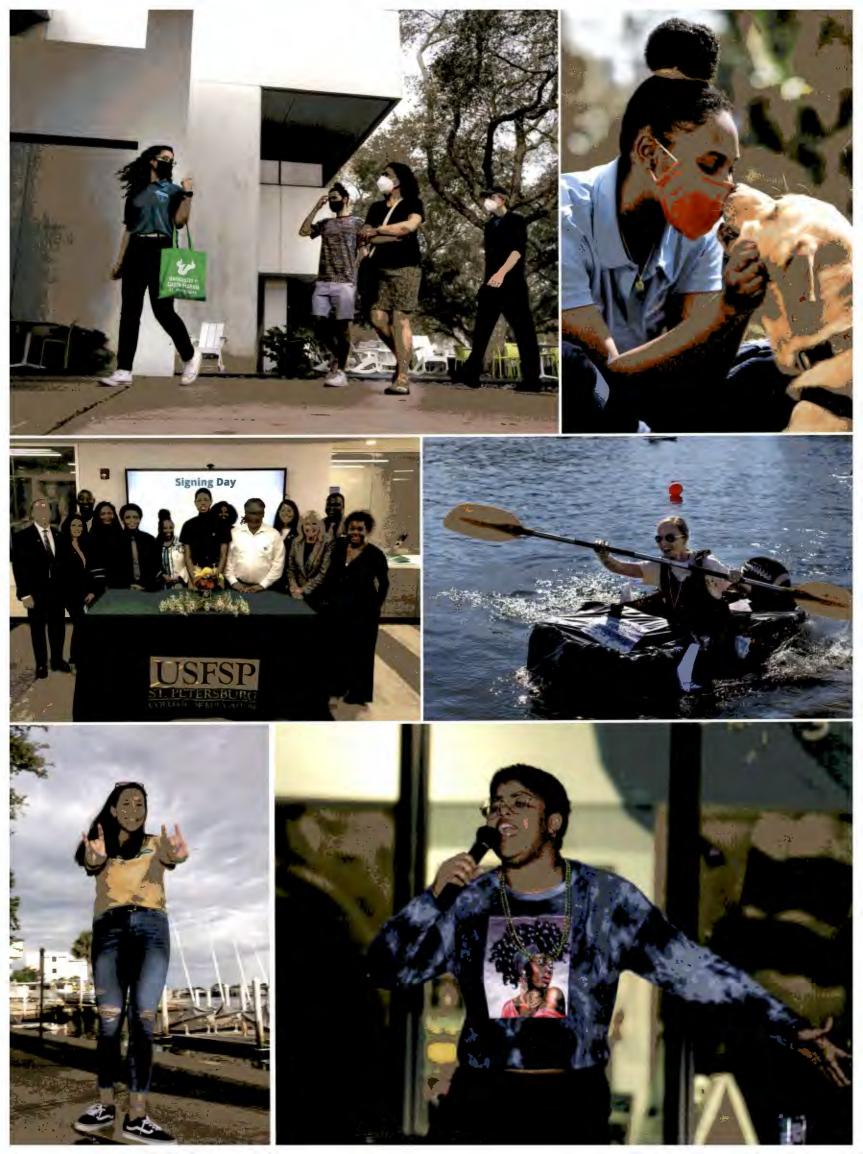
We have several major problems driving biodiversity down. Habitat loss is the big one. We keep clearing woods and putting in homes and shopping centers. We've got an increasing population right here in Florida, and that doesn't help.

The other is climate change. A lot of people are talking about it. Not too much has happened yet, but it's is starting to happen. Our grandkids and their kids are going to be in for some surprises.

Invasive species are also a problem. Florida is one of the worst in the world because of the pet trade. A lot of exotic species are released, like the pythons in the everglades. We also have over-exploitation—for example, rhino horns, elephant tusks and over-harvesting animals for food.

Those are the things we need to work on to stem the tide. We're going to have to make some compromises or keep losing species.

We have to be able to understand them to protect them.





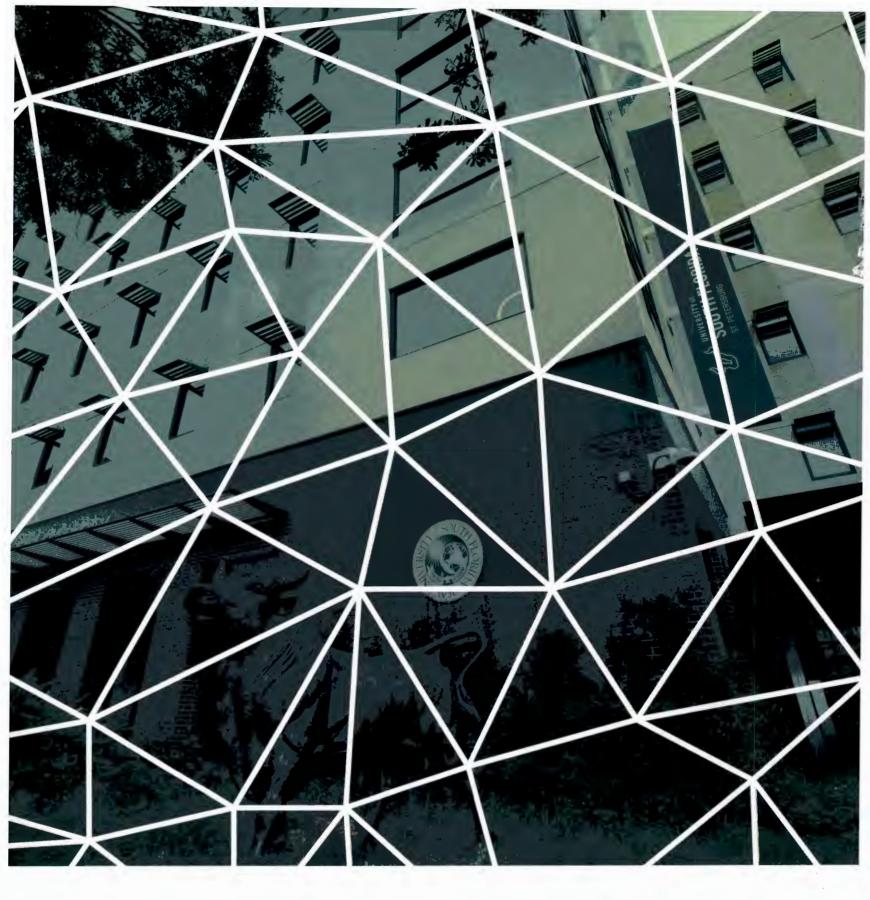












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