



PRESIDENT'S MESSAGE UNBRIDLED AMBITION®

lorida Atlantic University has accomplished much in recent years, and I am incredibly proud to have served as president since 2014. Over the summer, I announced my decision to step down at the end of this calendar year. My decision comes at a time that I believe is not only right for me personally, but also right for the university.

I will take on an important new role within the university as we draw our road map for the next 10 years, and beyond. As University President Emeritus, I will have the time and flexibility to focus on certain projects that are especially meaningful to me, and to our Board of Trustees. This includes steering Florida Atlantic to the Carnegie R1 classification for "very high research activity," which will prove transformational for the university.

On a personal level, I look forward to spending more time with my family. I want to thank my wife, Carolyn, for always standing by my side. As FAU's First Lady, she helped to create an atmosphere of excitement across our campuses and introduced many new friends to the university.

My time as president has been wonderful, and I am excited for this new chapter. I am looking forward to the many university events that fill the fall semester calendar, including watching the Owls play their final football season in Conference USA before moving to the American Athletic



Conference. We will continue to contribute to South Florida's vibrant culture by providing a number of theater, music and dance performances for our community to enjoy. And, thanks to partnerships and philanthropic gifts, we are improving cyberand national security, and working to meet our nation's growing need for health care professionals.

I am certain this great university will remain in good hands after I leave office. I know this will be the case because the important work of our faculty, staff and students will continue under the new leadership. After all, it truly is the people who make this university so successful. I hope you enjoy reading about their research, accomplishments and accolades in this issue of *Florida Atlantic* magazine.

Go Owls!

John Kelly President





UNIVERSITY MAGAZINE

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> **86** TIME MACHINE A Look Back



Florida Atlantic researchers recently discovered that without the moon's light, baby leatherback sea turtles have trouble finding the ocean after they hatch.

For most marine turtles, the seaward journey upon hatching is straightforward. However, leatherback hatchlings often get disoriented and spin around in circles trying to find the ocean. Circling wastes energy and puts them at increased risk of danger from predators like birds, raccoons and crabs, said Samantha Trail, a doctoral student in the Department of Biological Sciences in the Charles E. Schmidt College of Science and lead author of the new research.

To better understand why this circling behavior happens and why it is most commonly observed in leatherbacks, Trail, and her advisor and co-author, Michael Salmon, Ph.D., research professor, first had to determine how sensitive the leatherbacks were to light. They discovered that compared to their hard-shelled relative, the

loggerhead, leatherbacks were 10 to 100 times less sensitive to light wavelengths.

Leatherback eyes also failed to show any obvious structural adaptations that might offer improved vision function under dim lighting conditions, such as a larger cornea or lens. That finding led the researchers to the hypothesis that circling might be related to how much light was present at the beach when hatchlings crawled from the nest to the sea. They then compared how the two species behaved under two different moon phases: bright light during a full moon and only starlight under a new moon.

Results of the study, published in the journal Animal Behaviour, revealed that under dark new moon conditions, leatherbacks circled more than loggerheads. But why this happens surprised the researchers because leatherbacks, both as juveniles and as adults, feed during the day and at night, whereas green turtles and loggerheads primarily feed during the day.





Top left: A baby leatherback sea turtle swims to deeper waters after being released by scientists in Juno Beach.

Above: Doctoral student Samantha Trail at a nesting beach in Florida with a baby leatherback sea turtle.

Left: A hatchling leatherback makes its way from the shore to the ocean.

"Leatherback eyes are less sensitive to all wavelengths of light than loggerheads, and during a dark night, they experience difficulty in determining the location of the seaward horizon," Trail said. "Even so, leatherback hatchlings eventually crawl to the sea, even during a new moon. It just takes them longer because they stop occasionally to circle, which we think enables them to re-evaluate, and eventually confirm, the correct crawl direction."

These results raised an obvious question: why should leatherbacks be less sensitive to light than loggerheads, especially since circling lengthens the time hatchlings remain on the beach and increases exposure to terrestrial predators? Trail and Salmon hypothesize that those costs persist because other differences in leatherback visual capabilities enhance their ability to detect prey, mates or favorable habitats in the open ocean, where these turtles live. That habitat presents a visual environment that is very different from the one occupied by loggerheads, a species that for the most part resides in shallow, coastal waters.

EXPANDING GLOBAL COLLABORATIONS

Vice President for Research Earns Fulbright Scholarship

A research scientist for more than two decades, Daniel C. Flynn, Ph.D., leads all research-related endeavors across Florida Atlantic. Since joining the university as vice president for research in 2015, annual research expenditures have nearly tripled. Flynn also built a robust pipeline for entrepreneurship and economic development, strengthening the university's corporate partnerships in research.

Now, as a recipient of a prestigious Fulbright Scholarship, Flynn is pursuing research and collaboration with international partners in a program designed to familiarize him with the process of translating research discoveries into economic and societal benefits.

The Fulbright Program is the U.S. government's preeminent educational and cultural affairs program. It offers renowned students, educators and accomplished professionals support to pursue research and professional projects in partnership with more than 160 countries worldwide.

As a member of the 2022 International Education Award delegation, Flynn is taking part in a two-week group seminar designed to acquaint him and other administrators from the U.S. with France's higher education and research systems.

"This experience allows me to gain a new perspective in refining the means we utilize in engaging faculty and developing intellectual property and collaborations with international counterparts, thus broadening the research portfolio at FAU," Flynn said.

Flynn received his doctorate in virology from North Carolina State University and spent more than two decades in various research-related roles in the fields of cancer cell biology and breast cancer invasion before making his transition to research administration in 2008.



"Dan's investment in collaborative academic achievement and technological growth have resulted in exponential increases in research funding and expenditures for the university," said FAU President John Kelly. "This scholarship provides an exciting opportunity to further expand innovative research, education and collaboration between Florida Atlantic faculty and scientists worldwide."

Here is what Flynn said about this opportunity:

Q: What inspired you to pursue the international education Fulbright Scholar Program?

A: I had a very successful career as a research scientist and was able to develop Protea Biosciences, a start-up company that was reasonably successful. It lasted about 16 years and employed nearly 50 people.

I learned a lot about how to bring scientific discoveries to the marketplace to benefit society. This experience motivated me to move into research administration and help guide other faculty on how to develop their research discoveries into applications that can help people.

The Fulbright Scholar Program will allow me to take my experiences and the lessons I've learned and share them with an international community and, in turn, learn from them what works well. This exchange of knowledge will allow me to bring back new information and help to enrich our research environment at FAU.

Q: How might your past and current experience in research contribute to the international delegation?

A: In addition to my time with Protea Biosciences, I had the opportunity to be

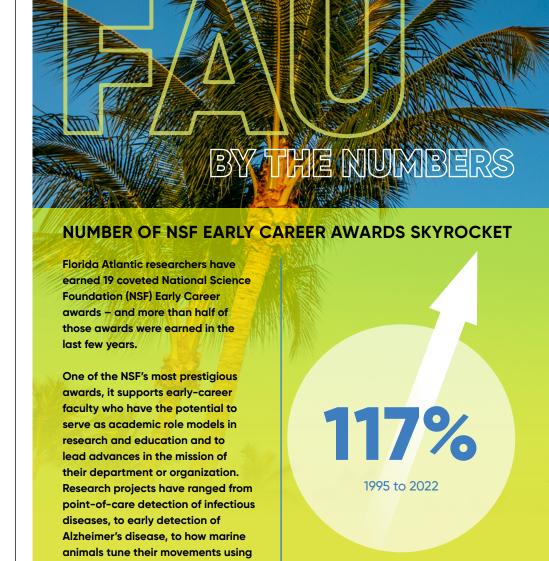
mentored by a CEO while serving as a consultant and chief science officer for a company. Since then, I served on the board of BioArkive, Inc. where I assisted in the preparation of an acquisition by Immuneering, a San Diego-based pharmaceutical company. Currently, I advise three other small biotech start-up companies, including a very exciting one right here in Palm Beach County. All of these biotech companies are different. I am looking forward to sharing lessons learned from the combined experiences with the delegation.

Q: How does your participation in the Fulbright Program expand FAU's global reach?

A: The FAU Division of Research facilitates international research collaborations with Israel, Colombia and Ecuador — and soon, Chile and Bolivia. It is our hope that we can attract technology-based companies from these countries to have landing sites in Palm Beach County and to learn how to collaborate. It is our goal to have regional technology-based companies with headquarters in any of these countries.

Q: Reflect on a pivotal moment in your life that helped put you on your current trajectory.

A: In 2001, the director of the West Virginia University (WVU) Cancer Center took a chance on me and promoted me to associate director for cancer research. I was only 42 years old — relatively young for a position of that stature. While in this position, I applied for and obtained a \$22 million grant that supported research at WVU and funded the development of technology service centers to help faculty with research. Also, at the time, a technology was coming along called proteomics, which is the large-scale analysis of proteins. It inspired the development of a proteomics service center for WVU faculty. From there, I realized that proteomics would soon cause new companies to emerge and operate independently, so I decided to start Protea Biosciences. That experience fostered my interest in university technology transfer and how to take research from the laboratory to the marketplace.



HERE'S A LOOK AT TWO OF FLORIDA ATLANTIC'S RECENT NSF EARLY CAREER AWARD WINNERS:



their skin and skeletons.

Matt Ajemian, Ph.D., assistant research professor and director of the Fisheries Ecology and Conservation Lab at FAU's Harbor Branch Oceanographic Institute, received a \$1,103,081 NSF Early Career award to build fundamental knowledge on where and when large shell-crushing predators feed, ensuring a sustainable future for shellfish species.



Yufei Tang, Ph.D., assistant professor in the Department of Electrical Engineering and Computer Science in the College of Engineering and Computer Science, and a fellow of FAU's Institute for Sensing and Embedded Network Systems Engineering, received a \$634,514 NSF Early Career award to advance knowledge related to monitoring and designing marine and hydrokinetic energy systems, such as marine current turbines and wave energy converters. These systems could contribute significantly to a diversified energy economy, improving the nation's energy security and reducing reliance on fossil fuels.



FAU's researchers are working to develop the **best technologies** for industries.

What can they create for you?

Above: Patrick Grant, Ph.D., created a portable sanitizing device to clean face masks with ultraviolet light.



WWW.FAU.EDU/RESEARCH/ TECHNOLOGY-DEVELOPMENT

COMMUNITY

FELLOWSHIP FOR SOCIAL CHANGE ENTERS FIFTH YEAR

The Barb Schmidt Fellowship: Cultivating Community Involvement, Advocacy and Social Change is entering its fifth year of helping aspiring youth leaders develop the skills and knowledge needed to create social movements.

The fellowship is a partnership between the Dorothy F. Schmidt College of Arts and Letters and Peaceful Mind Peaceful Life, a nonprofit organization founded by longtime FAU supporter Barb Schmidt and her daughter, Michelle Maros.

Created in the aftermath of the tragic shooting at Marjory Stoneman Douglas High School in 2018, Schmidt approached Michael Horswell, Ph.D., dean of the College of Arts and Letters, with a vision to build a program that would help high school students channel their energy to "be the change" they wanted to see in the world.

"We have all been inspired by what youth leaders are doing to make our world a better place," Horswell said. "We want to support the work being done by facilitating students' growth in community engagement and social change efforts."

The Barb Schmidt Fellowship gives students hands-on experience through peer mentorship and workshops led by social influencers and faculty. Students also learn professional and technical skills that are essential for driving social change, as well as a variety of mindfulness techniques including meditation, journaling, mantras and affirmations to help them find lasting peace.

"As we say in Peaceful Mind Peaceful Life, 'outer peace begins with inner peace,'" Schmidt said.

After exploring the workings of social movements and gaining expertise, students work on a group project, which is presented at the end of the fellowship and launched as a real intervention. Initiatives that have come from the program include:

• Finding Outreach Opportunities Directly (FOOD): Provides youth across South Florida with opportunities to aid in the fight against food insecurity in their local communities.



"As we say in Peaceful Mind Peaceful Life, 'outer peace begins with inner peace."

- Barb Schmidt

- Anonymously United: Helps youth ages 12 to 18 with substance abuse and addiction by providing a space for them to seek help and spreading awareness about addiction.
- 64 Pink Dots: Helps women live healthy lives by educating them and distributing feminine hygiene products to those in need.

Since its inception, the fellowship has welcomed students from more than 30 high schools in Broward and Palm Beach counties to the two-semester, dual-enrollment program.

"This fellowship was created to honor and support local students as they create positive change," Schmidt said. "They are the future, and we need to support them in every way we can."

To learn more or to donate to the fellowship program, visit www.fau.edu/artsandletters/college-initiatives/barb-schmidt-fellowship.



plans for its future.

"Schools of architecture are a balancing act," Choma said. "There are many polyvalent dimensions that make up architecture. In particular, I would like our school to focus on three areas: technology, environment and community."

Choma previously served as director of the Master of Architecture program at Clemson University, held visiting professorships at the Massachusetts Institute of Technology (MIT) and The Cooper Union in New York, and was a researcher-in-residence at the Eidgenössische Technische Hochschule in Switzerland. He is a graduate of MIT and the University of Cambridge.

As the inventor of foldable composite structures, Choma patented a fabrication technique that allows fiberglass to fold by hand, similar to folding a sheet of paper. His material explorations were noted by CompositesWorld magazine as "spearheading research into the use of foldable composites," and he was recognized with awards from the American Institute of Architects (AIA) and the American Composites Manufacturers Association.

Choma joins a long line of dedicated faculty, staff and students who contributed to the School of Architecture's growth and success over the past 25 years.

Here's a look at a few key milestones:

1996: The School of Architecture was founded as part of the then College of Urban and Public Affairs. It initially offered only upperdivision education.

1998: Students organized a chapter of the AIA Students and hosted the organization's national conference.

1999: The school received accreditation by the National Architecture Accrediting Board.

2004: The School of Architecture expanded to offer a lower-division program on the Boca Raton campus.

2011: Through the Broward Community Design Collaborative, the school hosted the International Subtropical Cities Conference in partnership with the Queensland University of Technology (Australia). The event brought scholars from around the world to the Fort Lauderdale campus. The conference also caught the attention of the Association of Collegiate Schools of Architecture, which agreed to host the biennial international conference at Florida Atlantic again in 2013, placing the school firmly on the map as a center of scholarship in tropical and subtropical design.



2018: Florida Atlantic's Sea-Level Rise Adaptation Framework of Urban Areas won the AIA Institute Honor Award, a National Oceanic and Atmospheric Administration (NOAA) Florida Sea Grant award and the National Endowment for the Arts Award.

2021: Jeffrey Huber, associate professor, was selected to serve a three-year term on the National Strategic Council of the AIA. He is one of only 60 members nationally.

2021 and 2022: Huber and John Sandell, associate professor, earned the William G. McMinn Award for Outstanding Architectural Education Contributions from AIA Florida. This prestigious award honors individuals who make notable contributions to architectural education including teaching, research achievements and community activities.

In September, the School of Architecture celebrated its silver anniversary with a reception on the Fort Lauderdale campus. FAU President John Kelly applauded the school's success and shared his confidence in its future. "From producing face shields for first responders during the height of the pandemic, to developing strategies for urban areas impacted by sea level rise, FAU's School of Architecture is helping our community – and cities around the world – face the challenges ahead," he said.

The School of Architecture is training students to learn how to use artificial intelligence (AI) as a generative design tool, with the goal of establishing an AI laboratory on the Fort Lauderdale campus, said Choma. In addition, he is working on an industry-sponsored research agreement with Google to design and build a deployable and reconfigurable event structure for community engagement. He also plans to establish a new foldable structures and materials laboratory on the Boca Raton campus.

"The School of Architecture will continue to contribute to the growing complexities associated with the cultural and technological project of architecture," Choma said. "We, as a school and academic family of more than 1,000 alumni, will continue to embrace pragmatic constraints as poetic design opportunities, while we tackle the most challenging problems of our time."

FAU RECEIVES INNOVATION AWARD

Florida Atlantic was one of four universities nationwide to receive the 2022 Innovation Award from Encoura, LLC, at the annual Eduventures Summit. Encoura is an educational data science and research organization that serves more than 2,000 colleges and universities. The Eduventures Innovation Award honors institutions that exhibit excellence in equitable and inclusive higher education through innovative means.

"We believe thoughtful innovation can change the world and that is why we created this awards program, showcasing the best of higher education," said Cara Quackenbush, Eduventures senior vice president of research. "For the sixth year, our winners have sought to address the unprecedented challenges facing our sector by creating new, actionable and innovative initiatives that support a more equitable and inclusive opportunity for all students."

Florida Atlantic was recognized for its novel approach of using team-based analytics to break down organizational barriers and help students progress toward timely completion of their degree programs. The initiative established cross-functional teams that assess and intervene with academic issues before a student has a chance to fall behind. This has led to great improvements, particularly in retention and four-year graduation rates.

"It is a great honor for Florida Atlantic to be nationally recognized for our innovative approach to delivering success for all students – regardless of background," said Michele Hawkins, Ph.D., interim provost at Florida Atlantic. "We are proactive and use evidence to keep a record number of students on track for timely graduation, so that they can drive our regional and state workforce."



From left, Doug Hughes, CEO of Encoura; Maura Flaschner, FAU executive director of undergraduate admissions; Michele Hawkins, Ph.D., FAU interim provost; Tracy Boulukos, FAU assistant vice president for financial aid and new student service initiatives; and Cara Quackenbush, senior vice president of research for Eduventures.

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LEADING MODERN PROGRESS



'When We Know Better, We Can Do Better'

In 2020, Naelys Luna, Ph.D., took the reins as dean of Florida Atlantic's newly established College of Social Work and Criminal Justice, bringing together two essential schools for modern progress: the Phyllis and Harvey Sandler School of Social Work and the School of Criminology and Criminal Justice.

In just two years, Luna led the college to a top-100 ranking in *U.S. News & World Report's* list of the Best Grad Schools for Social Work. This year, the school climbed nearly 20 spots, to No. 79 in the nation.

"There are serious and systemic problems that we need to tackle, address and change," she said. "I believe in how the two professions of social work and criminology/criminal justice can really come together to provide solutions."

Previously, Luna served as interim dean and director of the Phyllis and Harvey Sandler School of Social Work. During that time, she broadened her impact as an administrator by developing Florida's first Doctor of Social Work (DSW) program and facilitating a \$7 million gift from the Sandlers to name the school.

Under Luna's leadership, the DSW program graduated its first cohort of doctoral students in 2019 and continues to produce high quality professionals who contribute to the program's 98 percent job placement rate. Since the restructuring of the college, it also now offers two master's and two undergraduate degree programs, three specialization certificate programs and four post-graduate certificate programs. Additionally, it houses a number of research and service centers, including the Child Welfare Institute, the Healthy Aging Academy, and the Robin Rubin Center for Happiness and Life Enhancement.

Luna said she is passionate about working to benefit the FAU community and beyond. In 2020, she and Safiya George, Ph.D., dean of the Christine E. Lynn College of Nursing, visited the Universidad del Quindío in Armenia, Colombia. During this trip, they explored interprofessional collaboration with the colleges of nursing, medicine,

social work and social science for potential research and student service-learning opportunities.

In addition, Luna helped develop FAU's Community Conversations event series, which provides a space for students, staff and faculty to explore and discuss topics at the intersection of social work and criminal justice. Led by subject matter experts, the conversations address critical and timely issues such as victim advocacy and the prevention of mass violence. Guided by the motto, "when we know better, we can do better," Luna said these dialogues demonstrate productive ways in which participants can use their voices to foster inclusivity and generate positive change.

As a member of the Palm Health Foundation's Brain Health Advisory Council, Luna is part of a group of experts tasked with strengthening the connections between brain health research, the community and Palm Beach County's health care system. She also is president of the Florida Association of Deans and Directors, and serves on the boards for the National Association of Deans and Directors, the Association of Latino/Latina Social Work Educators, and the Journal of Concurrent Disorders. Luna was named a 2022 Hispanic Woman of Distinction, in recognition of her impact as a Latina leader in South Florida.

Luna's reach — from working with students to advocating for research-based policy improvements to guiding the college toward the future — is creating a legacy of interdisciplinary care for Florida Atlantic, as well as our local and global communities.

"From our faculty's research into some of society's most pressing challenges, to our high student achievement, the upward growth trend of our academic programs, and our ever-increasing offerings for our community and beyond, there are so many wonderful things happening at the college," she said. "I am privileged to be a part of its rich history and bright future."

FACULTY SPOTLIGHT

NEW DEAN TO GROW RESEARCH FOOTPRINT

Veteran ecological researcher Valery Forbes, Ph.D., understands that research is key to growth — and Florida Atlantic's push to increase research activity is one of the things that inspired her to become the new dean of the Charles E. Schmidt College of Science.

"It's energizing to be part of an ambitious university with a bold strategic plan," Forbes said. "High on my agenda is strengthening the College of Science's research portfolio and bolstering the university's trajectory toward R1 research status."

Awarded by the Carnegie Classifications of Institutions of Higher Education, R1 status recognizes "Very High Research Activity," and is the highest and most coveted designation among research universities. This status will position Florida Atlantic as one of the nation's top academic institutions.

As the former dean of the College of Biological Sciences at the University of Minnesota (UMN), Forbes oversaw a \$100 million budget. She secured partnerships with government and industry, grew enrollments while maintaining high admissions standards and launched the Dean's Undergraduate Research Program.

Forbes said that she plans to draw on her previous leadership experience to grow the College of Science, which has academic and research footprints across three campuses and is home to some of the university's most popular majors.

"As one of the largest colleges at FAU, it is essential that we not only have strong researchers, but that we have research leaders who want to create synergistic partnerships across FAU and beyond," Forbes said. "I plan to help faculty attract larger, multipartner grants and projects, reduce administrative barriers for faculty to lead major collaborative research efforts, institute seed funding and provide increased opportunities for faculty to step up and allow them to lead high-impact research initiatives in our areas of strength."

Forbes also is an enterprising researcher and academic leader with international experience that pairs well with Florida Atlantic's thriving scientific community. She works extensively with industry and is collaborating with Syngenta Crop Science to develop models to predict the risks of pesticides and other stressors to threatened and endangered species. Additionally, she received a \$500,000 grant from the National Science Foundation



to examine how different mammalian species respond at the cellular level to changes in their environment.

Prior to her time at UMN, Forbes served as director of the School of Biological Sciences at the University of Nebraska – Lincoln. She also was the founding department head and professor in the Department of Environmental, Social and Spatial Change at Roskilde University in Denmark. Forbes received a doctorate in coastal oceanography and a master's degree in marine environmental science from Stony Brook University in New York.

"My research has been extremely international, and I envision establishing greater international partnerships, and reinforcing current relationships with renowned research partners, such as the Max Planck Florida Institute for Neuroscience," Forbes said. "We have the only Max Planck Institute in North America in our backyard — that is certainly a feather in our cap and should be nurtured."

Forbes added that she is looking forward to deepening ties with FAU's fellow colleges and research institutes. "I am very excited about the new FAU Health Network, given that so much of the college's research and education impact the health sciences," she said. "I believe the Schmidt College of Science is well positioned to contribute and lead in the FAU Health Network initiative, working with FAU and community partners to cultivate a vigorous health network for our region."

The new dean's background also includes leading major capital projects. Most recently, Forbes oversaw the development of a \$110 million biomanufacturing innovation center at UMN, which will grow the institution's footprint in biotechnology and provide a new revenue stream. As part of the university's recent philanthropic campaign, Forbes exceeded her college's fundraising goal a year ahead of schedule — and with major success in raising funds for student scholarships.

In addition to broadening FAU's outreach to scientific and community partners, Forbes is prioritizing student success as a key part of her plans for the college.

"Increasing opportunities for students to do research with world-class faculty, and paying them a reasonable wage to do so, is something we are uniquely positioned to do," she said. "I've seen the impact this can have on both students and faculty, and it is something I definitely want to promote. Providing authentic research experiences for undergraduates can be life changing."



STUDY FIRST TO LINK WEED KILLER ROUNDUP® TO CONVULSIONS IN ANIMALS

Florida Atlantic researchers are among the first to link Roundup,® the world's most commonly used herbicide, to convulsions in animals.

Results of the study, conducted with researchers from Nova Southeastern University and published in *Scientific Reports*, showed that Roundup® and its key ingredient, glyphosate, increased seizure-like behavior in soil-dwelling roundworms. Additionally, the research suggests that glyphosate targets GABA-A receptors, which are essential for locomotion and help to regulate sleep and mood in humans. It also provides evidence to further investigate how prolonged exposure and accumulation may lead to neurodegenerative diseases such as Parkinson's disease.

What sets this research apart is that it was done at significantly lower levels than recommended by the EPA and those used in past studies.

"It is concerning how little we understand the impact of glyphosate on the nervous system," said Akshay S. Naraine, MSc., project lead and a Ph.D. student at FAU and the International Max Planck Research School for Synapses and Circuits. "More evidence is mounting for how prevalent exposure to glyphosate is, so this work hopefully pushes other researchers to expand on these findings and solidify where our concerns should be."

FAU IN THE NEWS



There's no X chromosome or Y chromosome. There's just the environment directing the embryo to be male or female. The turtles that we bring in here are a sample of what's hatching on our beaches throughout the entire season. And we're seeing more and more all-female years. If we're only making females, that's not going to pan out well in the future."

Jeanette Wyneken, Ph.D., professor of biological sciences in the Charles E. Schmidt College of Science, to **Scripps National TV** on her groundbreaking research on sea turtles' sex ratios and climate change.

"We can increase enrollment, we can increase the number of faculty, we can expand programs. There's a whole lot that we can do with that funding."



Safiya George, Ph.D., dean, Christine E. Lynn College of Nursing, to *CBS12 News* on how Florida Gov. Ron DeSantis' announcement of a new initiative to help train the next generation of nurses could help solve the nursing shortage.

"It's not just that marine snow transports plastics or aggregates with plastic. It's that they can help each other to get to the deep ocean."



Luisa Galgani, Ph.D., Marie Curie senior research fellow at FAU Harbor Branch Oceanographic Institute, to **The New York Times** on how it's snowing microplastics in the ocean.

"I would not want to be buying right now. I would want to rent."



Ken H. Johnson, Ph.D., economist and associate dean in the College of Business, to **Forbes** about the U.S. housing market nearing its peak.



"You would not want to be there on that day. There was a turbulent wall of death heading up the river. In addition, all these glowing spherules are falling out of the sky. They're like beads of superheated glass reentering the Earth's atmosphere after being ejected from the crater site at the Yucatán. Then there was all this seismic shaking. It was really hell on Earth."

Robert DePalma, paleontologist and adjunct faculty member in FAU's Department of Geosciences in the Charles E. Schmidt College of Science, to *The Washington Post* on how his discoveries have shed new light on the day the dinosaurs died. DePalma collaborated with FAU associate professor of geosciences, Anton Oleinik, Ph.D.

"Understanding how these animals do it and how they're so successful could teach us a lot about what is needed to be able to survive in the future climatic conditions that we're supposed to see."



Marianne Porter, Ph.D., professor of biological sciences in the Charles E. Schmidt College of Science, to **USA Today** about the epaulette shark, a newly discovered species that uses its fins to walk both in and out of water.

"Fed officials must not become complacent. They've failed. They're still failing. Fortunately, it is not too late to make things right by delivering price stability to the American people."



William Luther, Ph.D., associate professor in the College of Business, to *Fortune* for a story about rising inflation.

"Regulation is really the only other avenue — and that's up to the countries, to have the management in place and the national parks and marine protected areas. But to see the fishermen bring back a significant batch of eggs, and then to see those healthy conchs metamorphose in 21 to 28 days, feels like a huge accomplishment."



Megan Davis, Ph.D.,
research professor at
FAU Harbor Branch
Oceanographic Institute,
to WIRED about her work
on the first hatchery and
nursery in the Caribbean
run by local fishers to save
the queen conch.



"We hadn't discovered a whole new sensory system in centuries. Imagine discovering that animals can see or hear, just a few decades ago."

Steve Kajiura, Ph.D., shark expert and professor in the Charles E. Schmidt College of Science, to *American Scientist* about Adrianus Kalmijn's finding 50 years ago that sharks and rays can sense electromagnetic fields and use them to locate hidden prey.

"What sets these students apart is their tendency to think strategically about manipulating others and it's likely a lasting trait. For people who care about their status, a disagreement is never just a disagreement. Whether you're 15 or 50, everything is an exercise in maintaining and improving popularity."



Brett Laursen, Ph.D., professor of psychology in the Charles E. Schmidt College of Science, to *The Wall Street Journal* on his study about how children use conflict to win popularity.

"While the data indicate that those who have one to two drinks daily have lower risks of cardiovascular disease than nondrinkers, it is also true that the difference between drinking smaller and larger amounts of alcohol means the difference between preventing and causing premature death."



Charles H. Hennekens, M.D., Dr.PH, first Sir Richard Doll Professor of Medicine in the Charles E. Schmidt College of Medicine, to *HealthDay* on his study on the alarming increase of deaths in the U.S. from alcoholic cirrhosis.

RANKINGS AND RECOGNITIONS

Florida Atlantic is highly ranked by several leading authorities and is a recognized leader in equitable student success.

U.S. News & World Report

BEST PUBLIC SCHOOLS

SOCIAL MOBILITY









TOP-RANKED UNDERGRADUATE PROGRAMS IN BUSINESS, COMPUTER SCIENCE AND NURSING

Washington Monthly

Rankings based on social mobility, research, as well as community and national service.



#16

"AMERICA'S BEST BANG FOR THE BUCK COLLEGES IN THE SOUTHEAST"

NATION'S BEST PUBLIC AND PRIVATE UNIVERSITIES

College Consensus "Best Value Colleges and Universities"

Combines ranking systems produced by *U.S. News*, *Wall Street Journal* and *Forbes*, among others, with student reviews and low tuition rates.



NATIONWIDE

Diverse: Issues in Higher Education magazine

DEGREE PRODUCER FOR AFRICAN AMERICANS



DEGREE PRODUCER
FOR HISPANICS



Insight into Diversity magazine

TWO-TIME RECIPIENT OF THE HIGHER EDUCATION EXCELLENCE IN DIVERSITY AWARD





THE MADDEN CENTER





The Madden Center for Value Creation is named in recognition of **Bart J. Madden**, independent researcher, author, and expert in the field of investment research and money management.

The Madden family's generous \$3 million gift—the single largest expendable gift ever made to the College of Business—supports scholarly and student activities, events, and the promotion of value creation for widespread prosperity all aligning with the Center's mission:

- Promote Value Creation
- **©** Contribute to Worldwide Education
- Focus on Firm Research



IMPACT to DATE



1000+ Event Attendees



10 Conferences

Conference topics: Corporate Governance, Higher Education Finance, Accountability, and Governance



Madden Center Advisory Board Member, Vernon Smith, Ph.D., Nobel Laureate in Economics speaking with FAU students.



"Madden Fellows" - scholarship recipients receive funding for tuition and conferences/programs costs for APEE, Abigail Adams summer institute, FEE, AEI institute, TFAS and more.

"Millionaire Mindset" Club - student club for learning more about debits and credits, taxes, checks, stocks, affiliate marketing, and cryptocurrency.



ENSURING 'MICROBE-FREE' MARS SAMPLES

The Mars 2020 Perseverance Rover is collecting samples in search of signs of ancient microbial life, which would advance NASA's quest to explore the past habitability of Mars. Before the samples collected by the rover return to Earth — no earlier than 2031—FAU's Gregg Fields, Ph.D., is helping NASA design protocols for sterilizing Mars material and protecting the biosphere. He is working in collaboration with a team of scientists to ensure a "microbe-free" return of Mars samples in a vessel with multiple layers of protection.

"I don't think that there are any dangerous microorganisms and proteins on Mars, but we still have to prepare and protect against it," said Fields, executive director of FAU's Institute for Human Health and Disease Intervention, and professor in the Department of Chemistry and Biochemistry, Charles E. Schmidt College of Science.

The car-sized rover landed in the Jerezo Crater, a 28-mile-wide basin located in the planet's northern hemisphere. Experts believe that around 3.5 billion years ago, a river flowed into a body of water about the size of Lake Tahoe, which straddles the border of California and Nevada. This is one of the best

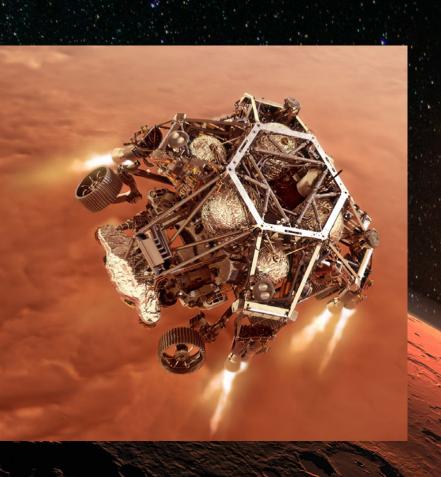
places to search for signs of microbial life, as the ancient river could have collected and preserved organic molecules, according to NASA.

While the rover explores, it will collect samples of rocky material — up to 30 of which may be returned. The M2020 rover is equipped with seven instruments, 25 cameras — the most ever in deep-space exploration — and even a helicopter the size of a tissue box to take aerial images.

By containing the samples obtained by the rover within an ultra-clean environment when it returns to Earth, scientists will know that any potential discovery of evidence of life did, in fact, originate on the red planet. Before the rover went to space, NASA and its engineers worked hard cleaning the spacecraft to prevent Earth's microbes from contaminating Mars. Now, the plan is to ensure that when the samples return to Earth, material from the Mars Rover is either fully contained or sterilized, just to be safe.

Fields joined the NASA Jet Propulsion Laboratory based out of California, Nelson Laboratories headquartered in Utah,





and Johnson & Johnson based in New Jersey in June 2021 to work on this project. The research group has been addressing heat-resistant bacteria and individual proteins that can act as infectious agents on Earth. Fields is providing complementary technologies from his laboratory to assess degradation of protein-based targets.

"Most proteins are obviously very helpful in our bodies. However, there are very specific proteins that have been noted to behave in a pathological fashion that contribute to disease, for example, Alzheimer's and Parkinson's diseases," Fields said.

The overarching plan would be to inactivate or encapsulate any potentially hazardous bioactive particles by heating and sealing the sample tubes inside a multilayered vessel that will return to Earth. However, the ideal temperature and duration to get the job done is still being determined. To figure this out, the partner laboratories send Fields heat-treated samples of a common protein called bovine serum albumin, as well as model prion protein. The team is targeting near-total disassembly of the protein — more than enough to render it inactive.

So far, Fields has tested the protein treated at 350- and 400-degrees Celsius (662- and 752-degrees Fahrenheit). Because the samples will not return to Earth earlier than 2031, he has time to continue experimenting in his laboratory.



HONORS COLLEGE STUDENT NAMED UDALL SCHOLAR

Bernard Harrigan was named a 2022 Udall Scholar, marking the first time an FAU student was selected for this scholarship. The Udall Foundation awards scholarships to college sophomores and juniors for leadership, public service and commitment to issues related to Native American nations or to the environment.

Harrigan, 46, is one of 55 recipients nationwide, and the only one in Florida. He is pursuing a bachelor's degree in environmental justice and social change in the Harriet L. Wilkes Honors College. Harrigan was named an outstanding delegate at the National Model United Nations Conference as a member of the award-winning Leon Charney Diplomacy Program, and recently conducted research on international law as a Morton Research Fellow.

"Seeing the devastation of Florida's barrier reef systems, climate and resources, one can come to a conclusion that we are on a path less desired," Harrigan said. "I am trying to make sure that the future will have beauty and reasons to continue to push forward like we always have. I know that to achieve this, the solutions need to be equitable to allow all to help make positive strides toward a better tomorrow."



TRANSFORMING URBAN LIVING

New \$26 Million NSF Engineering Research Center for Smart Streetscapes

The new \$26 million National Science Foundation (NSF) Engineering Research Center for Smart Streetscapes (CS3) is not just a boon for economic development — it's a concept to make downtown communities more accessible, safer and more attractive for residents, businesses and visitors to live, work and play.

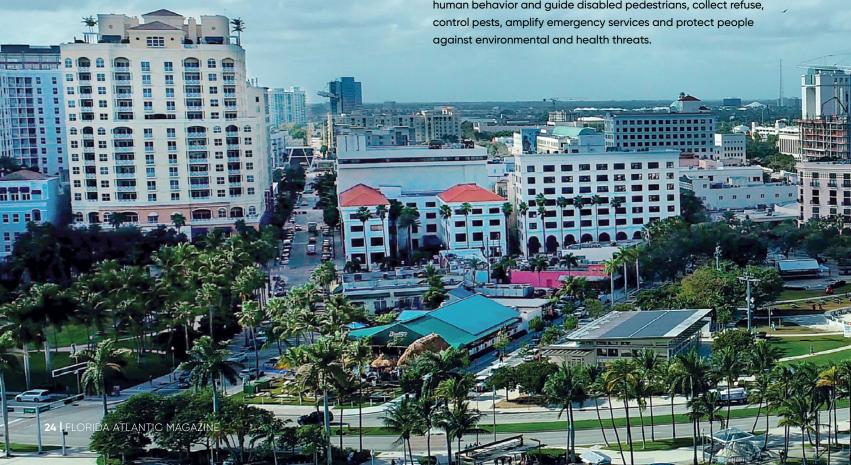
The idea is to develop livable, safe and inclusive communities by focusing on the streetscape – the neighborhood streets, sidewalks and public spaces. For Florida Atlantic University, the CS3 focus is on the vibrant City of West Palm Beach – urban living at its best.

The Engineering Research Center program is NSF's flagship engineering program to catalyze convergent research to address large-scale societal challenges. FAU's Institute for Sensing and Embedded Network Systems Engineering (I-SENSE), and College of Engineering and Computer Science, landed this major center with Columbia University, Rutgers University, the University of Central Florida and Lehman College. As one of the most competitive research programs in the country, CS3 was selected from among hundreds of candidate centers.

CS3 builds upon FAU's longstanding partnership with the City of West Palm Beach, developed through the West Palm Beach Mobility Intelligence Project, led by FAU's I-SENSE. Launched in 2019, and supported through the City of West Palm Beach, the Knight Foundation, and the Community Foundation of Palm Beach and Martin Counties, the pedestrian mobility sensing project plays a central role in CS3.

"Over the next decade, CS3 will bring a range of smart streetscape technologies to the City of West Palm Beach and position the city as a national leader in smart cities," said Keith A. James, West Palm Beach mayor. "These technologies will enable new streetscape applications designed to enhance livability, safety and inclusivity across the West Palm Beach community – from enabling safer crosswalks, to improving transportation and parking, to assisting pedestrians with disabilities. The specific applications to be developed will be selected and guided through continuous public engagement."

The nation's streetscapes define the character of American communities, linking people with social and commercial institutions, and bonding people across demographic identities. Streetscapes are prime sites for deploying engineering research to fortify society. A "smart streetscape" could instantly sense human behavior and guide disabled pedestrians, collect refuse, control pests, amplify emergency services and protect people against environmental and health threats.



As one of the most competitive research programs in the country, the National Science Foundation Engineering Research Center for Smart Streetscapes was selected from among hundreds of candidate centers.

Jason Hallstrom, Ph.D., executive director of I–SENSE, serves as deputy director and chief research officer for CS3. He leads an expansive FAU team from I–SENSE, the College of Engineering and Computer Science, and researchers, staff and students from across the FAU community.

"Our team could not be more excited to embark on this path with our partners to advance the future of the nation's streetscapes, and to deliver fundamental improvements in the livability, safety and inclusivity of American communities through engineering research and education," Hallstrom said.

FAU's CS3 team leads include Dimitris Pados, Ph.D., Schmidt Eminent Scholar Professor, Department of Electrical Engineering and Computer Science, a fellow of I-SENSE and director of the Center for Connected Autonomy and Artificial Intelligence; Jinwoo Jang, Ph.D., assistant professor, Department of Electrical Engineering and Computer Science and an I-SENSE fellow; Jiannan Zhai, Ph.D., research assistant professor, I-SENSE; John Renne, Ph.D., professor and director of the Center for Urban and Environmental Solutions, Charles E. Schmidt College of Science; Valentine Aalo, Ph.D., professor, Department of Electrical Engineering and Computer Science; and Donna Chamely-Wiik, Ph.D., associate dean for undergraduate research and prestigious fellowships, Office of Undergraduate Research and Inquiry.

"Together with Columbia University and our other core partners, FAU will co-lead smart city research and innovation, capitalizing on and growing our collective experience in sensing technologies, artificial intelligence, high-speed wireless communication, simulation and forecasting, among other areas of expertise," said Stella Batalama, Ph.D., dean, FAU College of Engineering and Computer Science. "Joining forces with our academic, government and industry partners will help to ensure the rapid translation of these technologies for wide-use applications and fruitful economic impact."





Front: Charna Larkin; Back: Michael Horswell, Ph.D., dean of the Dorothy F. Schmidt College of Arts and Letters; FAU President John Kelly, Ph.D.; and Christopher Delisio, FAU vice president for Institutional Advancement

\$1.6M DONATION FUNDS **NEW OPPORTUNITIES**

Longtime benefactor Charna Larkin's most recent gift to Florida Atlantic creates two new opportunities for students.

A portion of the \$1.6 million donation establishes the Alan B. and Charna Larkin Student Opportunity Fund to provide scholarships for students in the Dorothy F. Schmidt College of Arts and Letters.

"I understand the importance of FAU to our greater community," Larkin said. "I want to ensure young people are given every opportunity to be successful and attend college regardless of their humble beginnings."

The funds also will help construct and name the Alan B. and Charna Larkin American Presidential Study on the third floor of the S.E. Wimberly Library, which will serve as a student study and gathering space, an educational site on the American presidents, and a community engagement location for small lectures, receptions and other special programs.

The distinctive space will house the Alan B. and Charna Larkin American Presidential Letters Distinguished Collection, which includes 46 letters signed by American presidents ranging from George Washington to Joe Biden. In addition, it will serve as a historical archive of the Alan B. and Charna Larkin Symposium on the American Presidency, an annual event established with a \$1 million gift in 2007 by the Larkin family in honor of Charna's late husband, Alan.

Additionally, the gift supports a collaboration between the library and the College of Arts and Letters. The Larkin Study will include a digital component with links to all presidential libraries and homesteads, as well as a platform for digital history students to develop exhibits using art, photos and documents.

"We are so grateful for these two generous gifts – the presidential study and the scholarship endowment," said Michael J. Horswell, Ph.D., dean of the College of Arts and Letters. "Charna's philanthropic vision elevates the profile of our college and university while providing students unique access to the historical record of the American presidency, and to the financial support to pursue their studies at FAU in the arts, humanities and social sciences."

NEW DEVICE COULD IMPROVE FERTILITY TREATMENT

Researchers from FAU's College of Engineering and Computer Science recently developed a new sperm sorting device that could assist those struggling with infertility — at a lower cost.

The device — a microfluidic chip — is fast, inexpensive, easy to operate and efficiently isolates healthy sperm directly from semen, according to Waseem Asghar, Ph.D., senior author of the study, and associate professor in the Department of Electrical Engineering and Computer Science. The semen is loaded into a chamber and the competent sperm swim against fluid flow toward a collecting chamber. This process allows for effortless



collection of healthy sperm, while minimizing contamination by deformed or dead sperm cells, Asghar said.

Assisted reproductive technologies such as in vitro fertilization, intrauterine insemination and intracytoplasmic sperm injection — when the sperm are injected directly into the egg —

all require healthy sperm cells for a successful outcome. Current sperm sorting methods require multiple steps, multiple types of equipment and take about two hours to isolate sperm cells. These methods also damage sperm during processing.

Results of the study, published in the Royal Society of Chemistry's journal *Analyst*, showed that sperm cells isolated from the collecting chamber in this microfluidic chip had several characteristics that would produce better fertility outcomes. This includes higher motility, or the ability to move properly; a higher number of normal cells; and less DNA fragmentation.

"This chip offers a one-step, one-hour operational benefit, which requires minimal training," Asghar said. "Moreover, this technology will considerably reduce the economic burden of fertility implementations, and both the chip and the sperm cells isolated from it offer great clinical significance and applicability."



BUILDING CORPORATE PARTNERSHIPS

FAU Business partners with our network of local, national, and global organizations and corporations to help meet the evolving needs of our business communities. We provide high-performing educational support with undergraduate and graduate degrees, professional development certifications, and corporate training.

Why Partner with FAU Business?

- Solve today's business challenges
- Develop tomorrow's business leaders
- Connect with high-quality talentUpskill employees with on-site,

on campus, or virtual training
 Create customized corporate programs



FAU BUSINESS CORPORATE PARTNERS

- 4Ocean
- ABC Global Communication
- ADT
- Bay State Milling
- Brazilian Business Group
- Broward Health
- Campus Management
- Career Source Palm Beach
- CHAUVET Lighting

- Children's Services Council
- Citrix
- City of Delray Beach
- City of Pompano Beach
- ClosetMaid
- Club Med
- Cross Country Healthcare
- Current Builders
- Everglades Coalition

- Geo Group
- Great American Beauty
- Holy Cross Hospital Healthcare Leadership
- Hospice of Palm Beach
- JM Family Enterprises
- MD VIP
- Ministry of Trade& Industry, Haiti
- NCCI

- Norwegian Cruise Lines
- Office Depot
- Preferred Care at Home
- Quantum Foundation
- SBA
- SHL
- Tecomet
- The Hirsh Center
- Тусо
- Waste Management

ENTREPRENEURSHIP

BALANCED MEALS ON THE GO

Recent graduate Brandon Feinstein won first place in FAU's 14th annual Business Plan Competition, for his idea to create a company offering restaurant-quality healthy meals from a vending machine.

His company, called Fit Oven, would provide the meals from custom-built vending machines that refrigerate, heat up and dispense the food to the consumer in 90 seconds or less.

Feinstein graduated from the College of Business in May but said the idea for the company started in 2018 when he was an undergraduate at Florida State University. Living in a campus dormitory with no access to a car, he was left to whet his late-night appetite with sodas, candy and chips from the dorm's vending machines.

"I weighed over 325 pounds, and my eating habits were terrible," said Feinstein, now "With all this technology we have, I always wondered, 'Why are these vending machines outdated?""

Feinstein returned home to Boca Raton and enrolled at FAU, where he developed his idea for balanced meals on the go.

He said he will use the \$10,000 prize money to build his venture, working to put the vending machines in airports and universities. He hopes to launch the first vending machine in three to six months, and eventually franchise the business.

Fit Oven was one of 44 entries in FAU's annual pitch competition that awards budding entrepreneurs seed money for their business ventures. The competition is hosted by the College of Business and the Adams Center



for Entrepreneurship. Because of the pandemic, this was the first year since 2019 that the entire contest was held in person.

John Thomerson finished in second place and won \$5,000 for Pet HealthCare Innovations, a company that makes devices for dogs with mobility impairments. Third place and \$2,500 went to SoFlo Cycles, a company created by Jack Wachter to provide motorcycles to riders in Florida and the southeastern United States.

"I was impressed with the number and quality of entries this year," said Roland Kidwell, Ph.D., director of the Adams Center. "That also resonated with the judges. They definitely can see a lot of entries turning into successful ventures."

Pipeline of Entrepreneurial Resources

For the first time, the Adams Center for Entrepreneurship included FAU's Veterans Florida Entrepreneurship Program (VFEP) contest and the FAU Wave entrepreneurial contest for students with the Business Pitch Competition. The three programs are part of FAU's Innovation and Business Development, a pipeline of entrepreneurial resources.

Shipmonk, a South Florida company started by FAU College of Business graduate Jan Bednar, donated \$5,000 for the pitch competition, while Office Depot donated \$1,000 for VFEP. In addition to sponsoring the \$2,000 Wave award, College of Business emeritus professor Eric Shaw '72, '73, Ph.D., also financed the \$1,500 prize money for VFEP by designating the Eric H. Shaw Entrepreneurial Excellence Award, a \$50,000 endowment.

August Davis, founder of On French, a food preparation and delivery service, earned the \$1,500 VFEP contest's Eric H. Shaw Entrepreneurial Excellence Award. Andrea Smith won \$1,000 by finishing second with GG by Amara, a company providing personal care products.

Davis and Smith became FAU's representatives for the statewide pitch competition at the Veterans Florida Virtual Expo in Orlando. Veterans Florida is a nonprofit agency created by the state to help military veterans transition to civilian life and promote Florida's status as the nation's most veteranfriendly state.

The FAU Wave contest challenges students to address societal issues and provides seed funding for their projects. Rachel Kavalakatt from the Harriet L. Wilkes Honors College won the 2022 Dr. Eric H. Shaw FAU Wave Excellence in Innovation Award of \$2,000. She created CarpalWear, a comfortable wristband and ring set that provides real-time biofeedback signals to manage and prevent carpal tunnel syndrome.

Engage Florida, a group of seven students, earned the community engagement award and a \$1,000 prize for their idea to improve scientific communication skills in undergraduate students who conduct their own research and present their findings in an accessible way to local schools. Members of the group include Harriet L.

"This year's participants are a testament to the excellence of innovation and talent coming from FAU's entrepreneurial pipeline."

— Regina Thompson

Wilkes Honors College students Shalakha Bonthu, Jose Delgado, Hibah Hussain, Joseph Lawless, Bilal Mutluguler, Matthew Pacheco; and Vineet Reddy from FAU's Charles E. Schmidt College of Medicine.

"This year's participants are a testament to the excellence of innovation and talent coming from FAU's entrepreneurial pipeline," said Regina Thompson, strategic and economic initiatives manager with FAU's Innovation and Business Development in the Division of Research. "These young professionals have many more opportunities awaiting them in their future endeavors."



AMAZING ACCOLADES AND AWARDS

FAU faculty, staff and students go above and beyond in the community and throughout the world to make a difference. Their work has not gone unnoticed.

Here's a look at some of the prestigious accolades and awards earned from across colleges and institutes.



ALLISON SWARTZ, M.D., chief medical officer and physician in the Charles E. Schmidt College of Medicine, received the Leonard Tow Humanism in Medicine 2022 award through the Gold Humanism Honor Society. The award is presented annually to a faculty member who goes beyond what is expected of them and further promotes the ideals of the society, including outstanding compassion in the delivery of care; respect for patients, their families and health care colleagues; as well as demonstrates clinical excellence.

ALLISON SWARTZ, M.D.

SIRI TERJESEN, PH.D., associate dean and professor in the College of Business, was named a Justin G. Longenecker Fellow by the **United States Association for Small Business** and Entrepreneurship. It is the association's highest recognition, given to individuals who have made outstanding contributions to the development, furtherance and benefit of small and medium businesses.

SIRI TERJESEN, PH.D.

MARK DI CORCIA, PH.D.,

MARK DI CORCIA, PH.D.

assistant dean for medical education in the Charles E. Schmidt College of Medicine, received the Bruce Rendina Professional Hero Award at the 19th annual Palm Beach **County Medical Society Services** Heroes in Medicine Awards. The awards spotlight individuals and organizations providing outstanding service to people in our local, national and/or global communities.

AWARDS ROUNDUP

ANNIE PAGE-KARJIAN, PH.D., DVM, assistant research professor and clinical veterinarian at FAU's Harbor Branch Oceanographic Institute, received the Young Achiever Award from the University of Georgia College of Veterinary Medicine for outstanding contributions and achievements in her field.

FLORIDA ATLANTIC UNIVER

Marine Mammal Rescue

3922

JEFFREY HUBER, PH.D., professor in the School of Architecture in the Dorothy F. Schmidt College of Arts and Letters, is the recipient of the 2022 William G. McMinn Award for Outstanding Architectural Education Contributions from the American Institute of Architects Florida chapter. This prestigious award honors individuals who make outstanding contributions to architectural education including teaching, research achievements in relation to architectural education and involvement in relevant community activities.

ANNIE PAGE-KARJIAN, PH.D., DVM

JEFFREY HUBER, PH.D.



IRENA KOFMAN, PH.D.,

associate professor in the Department of Music in the Dorothy F. Schmidt College of Arts and Letters, received a Fulbright U.S. Scholar Award to teach and perform piano at the University of Taipei in Taiwan for six months during 2023.



PHILLIP A. HOUGH, PH.D., associate professor in the Department of Sociology in the Dorothy F. Schmidt College of Arts and Letters, received a Fulbright Global Scholar Award to study the plight of coffee-producing farmers living across the global coffee belt regions of Latin America, Africa and East Asia.

DOUGLAS CUMMING, PH.D.,

DOUGLAS CUMMING, PH.D.

DeSantis Distinguished Professor of Finance and Entrepreneurship in the College of Business, received the Greater Fort Lauderdale Alliance's 2022 World Class Faculty Award for "innovative contributions in the areas of finance, economics and technology." The Alliance is Broward County's economic development arm that helps attract and retain highwage jobs across the county.

(continued on page 33)





OF THE COMMUNITY, FOR THE COMMUNITY

- ✓ As part of the FAU Health Network, we will optimize interprofessional training for future physicians, nurses, allied health professionals, and health technologists/engineers, starting in pre-k and extending through adulthood.
- ✓ The new FAU Health Network will also foster synergies to leverage technology such as predictive analytics, for bench to bedside research and education.
- ✓ Prestigious partnerships with Max Planck provide collaborative training and a joint M.D./Ph.D. program.
- Clinical rotations at numerous facilities throughout southeast Florida expose students to a wide range of specialties and also encourages networking and retention in the community.
- ✓ Major gifts for the College of Medicine continue to propel our efforts towards tuition relief.
- ✓ Our M.D. students consistently achieve ≥ 95% pass rate on their licensing exams, attributed to our innovative curriculum.
- √ 100% of our MD students successfully place into residencies; and many students match into top 50 programs across the country.
- ✓ Our fellowship placements are among the most competitive in the country.





fau.edu/medicine

Pictured: Cachae Alford, Class of 2025 President FAU Schmidt College of Medicine

(continued from page 31)



DEBRA HAIN, PH.D., professor in the Christine E. Lynn College of Nursing, received the 2022 Outstanding Contribution to the American Nephrology Nurses Association award. The award recognizes achievement in clinical practice, education, management, quality care, research, rehabilitation, collaboration and health policy advocacy.



Christine E. Lynn College of Nursing dean **SAFIYA GEORGE, PH.D.**, and professor **HOWARD BUTCHER, PH.D.**, were inducted into the American Academy of Nursing, one of the highest honors in the profession.



KATHRYN KELLER, R.N., PH.D., professor in the Christine E. Lynn College of Nursing, was inducted into the National League for Nursing's Academy of Nursing Education.

(ATHRYN KELLER, R.N., PH.D.

HARI KALVA, PH.D., professor and associate chair of the Department of Electrical Engineering and Computer Science in the College of Engineering and Computer Science, was named a National Academy of Inventors (NAI) Fellow for his cutting-edge research and innovation in the field of video compression and communication. NAI Fellow status is the highest professional accolade bestowed upon academic inventors who have made an impact on quality of life, economic development and welfare of society.

HARI KALVA, PH.D.

VARDS ROUNDUP

MONICA ROSSELLI, PH.D.,

professor and associate chair of the Department of Psychology in the Charles E. Schmidt College of Science, received the Lifetime Achievement in Cultural Neuropsychology Award from the Hispanic Neuropsychological Society. This award honors outstanding leaders and scholars who have made a significant contribution to the neuropsychology field over their lifetime.

PETER RICCI, ED.D.,

director of the hospitality and tourism management program in the College of Business, was named one of the 100 Most Powerful People in Global Hospitality by the International Hospitality Institute.



PETER RICCI, ED.D.



MONICA ROSSELLI, PH.D.



LISA ANN BRENNAN, PH.D., associate research professor in the Charles E. Schmidt College of Medicine, received the prestigious 2022 National Foundation for Eye Research's (NFER) Cataract Research Award. The award is given annually by the NFER to honor an emerging scientist who has made significant contributions to lens and cataract research, and who shows promise of developing into an international leader in the field.

LISA ANN BRENNAN, PH.D.

CRISTOBAL SALINAS, PH.D., associate professor in the Educational Leadership and Research Methodology Department in the College of Education, co-authored "Studying Latinx/a/o Students in Higher Education: A Critical Analysis of Concepts, Theory, and Methodologies," which was named Book of the Year by the American Association of Hispanics in Higher Education.

BETH PRATT, PH.D.,

assistant professor in the Christine E. Lynn College of Nursing, received the Florida Nurses Association (FNA) South Region Nurse Researcher of the Year Award. The FNA honors excellence in professional nursing individuals who lead and innovate through their exemplary courage, community service, advocacy, research and innovation, and years of commitment to the profession.

DOROTHY F. SCHMIDT COLLEGE OF ARTS AND LETTERS

FLORIDA ATLANTIC UNIVERSITY

ARTS, HUMANITIES AND SOCIAL SCIENCES TURNING YOUR PASSION INTO YOUR PROFESSION



Building Bridges, Breaking Barriers





in Health Care

Answering Florida's Call for a New Generation of Doctors, Nurses and More

BY GISELE GALOUSTIAN

n 2020, the Kaiser Family Foundation ranked states based on the number of communities that face health professional shortages. Florida is ranked No. 5 and is expected to be short 17,924 physicians and more than 59,000 nurses by the year 2035. The good news is that Florida Atlantic University is addressing these looming and daunting shortages with innovative programs and strategic alliances.

Home to more than 3.2 million people, Broward, Palm Beach and Martin counties lacked a dominant health care system like those in many comparable metropolitan areas. Until now.

The newly launched FAU Health Network is an unprecedented regional partnership established to address critical workforce pressures through enhanced medical education programs, accelerated medical research innovation, and access to clinical trials — all while continuing unrivaled levels of patient care.

The network also was created to maximize interactions between FAU's colleges including nursing, medicine, science, engineering and

computer science, education, business, social work and arts and letters to expand the ability to train the needed workforce in an interprofessional environment.

FAU Health Network's regional partners represent leading hospitals, health care systems, universities, colleges, health care districts and nonprofit organizations that provide care to underserved populations in Broward, Palm Beach and Martin counties.

"Florida has a growing need for more new physicians, nurses and other patient carerelated roles, such as medical and nursing assistants, technicians and social workers," said Julie Pilitsis, M.D., Ph.D., dean and vice president for medical affairs, FAU Charles E. Schmidt College of Medicine. "The FAU Health Network transcends the competitive landscape through education and research collaborations between our stellar public and private academic and medical partners. Together, we are answering Florida's call for the next generation of doctors, nurses and more."

This partnership marks the beginning of a transformative health network for our region. It is a true collaboration that brings together an already robust health care infrastructure to fortify our health care workforce and ultimately save lives and find cures for diseases."

- Brad Levine, chair of the FAU Board of Trustees

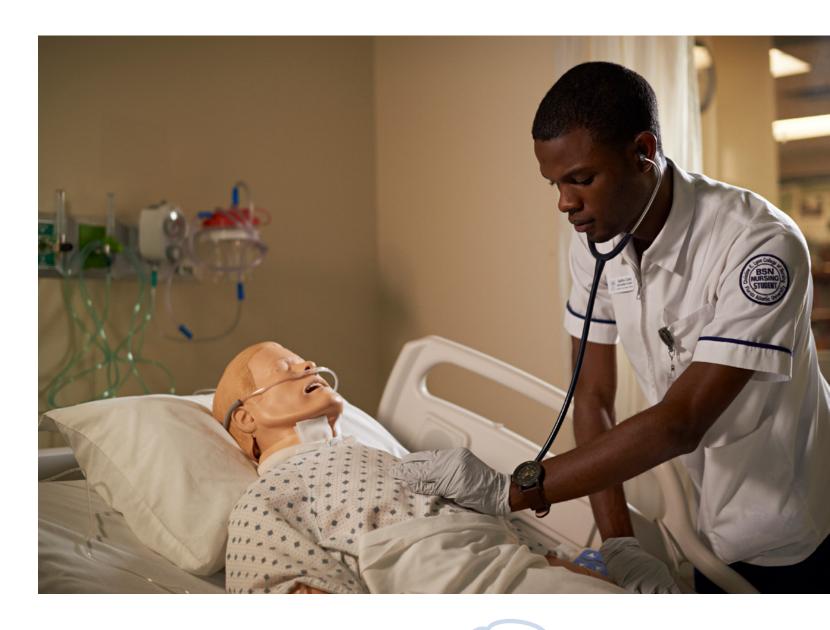


Preceding the FAU Health Network, leaders at FAU and the Schmidt College of Medicine wanted to ensure that the region would have an adequate and well-trained physician workforce. As such, more than a decade ago, they created the FAU Schmidt College of Medicine Graduate Medical Education (GME) Consortium to establish residency programs in specialties that would serve their communities.

FAU and its GME Consortium partners, Baptist Health South Florida's Bethesda Hospital and Boca Raton Regional Hospital, and Tenet Health's Delray Medical Center, St. Mary's Medical Center and West Boca Medical Center, have made great advances in helping to address Florida's physician shortages through its five residency and four fellowship programs. More than 177 resident physicians and fellows go through these FAU programs each year.

Since the inception of the first residency program in internal medicine in 2014, approximately 200 physicians have graduated from these programs to practice specialties in internal medicine, surgery, emergency medicine, psychiatry, neurology, vascular surgery, cardiology, geriatric medicine, and hospice and palliative medicine. Approximately 50 percent of all graduates end up practicing in Florida.

On the nursing front, FAU's Christine E. Lynn College of Nursing is ahead of the curve in identifying problems and finding solutions for nursing shortages with innovative programs and partnerships. Early on in the COVID-19 pandemic, the college teamed up with Cross Country Healthcare, Inc., a leading provider of advisory and workforce solutions, to offer monthly webinars to share information and tips on self-care to address compassion fatigue. Because of



the trends they saw, they decided to develop and conduct joint annual surveys.

The most recent national survey in September of nearly 2,000 employed and student nurses showed that overall, nurses remain passionate about patient care, citing helping people through meaningful work (66 percent), but highlighted areas of dissatisfaction and ongoing industry challenges, including pay rates/compensation (86 percent), staff shortages (53 percent), stress (39 percent) and burnout (35 percent) as the top career dissatisfiers facing the profession.

Importantly, results from the survey also provided very clear and specific areas for improvement and pinpointed areas of change that nurses believe would positively affect the profession. Approximately
50 percent of all
graduates from FAU's
medical residency
and fellowship
programs end up
practicing in Florida.



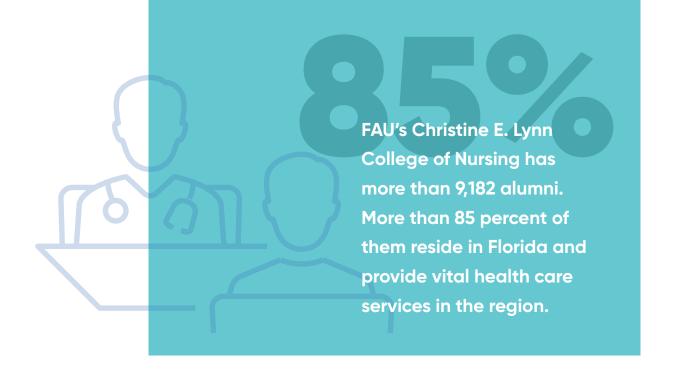
"Jointly with our colleagues at Cross Country Healthcare, we have identified solutions through our surveys to help ease burnout and reduce stress, as well as help nurses enjoy longterm and satisfying careers," said Safiya George, Ph.D., dean, Christine E. Lynn College of Nursing.

FAU's College of Nursing is instrumental in addressing the critical shortage of nurses with its four tracks of the Bachelor of Science in Nursing (BSN) programs. More than 400 BSN students graduate each year and enter the nursing workforce. Nearly 90 percent of them remain in Florida. The college also offers a Master of Science in Nursing (MSN), a Doctor of Nursing (DNP) and a Ph.D. in nursing. In addition, the college has developed important certificate programs to train nurses and other health care professionals locally and nationally. For example, the FAU Telehealth Certificate, launched in response to the COVID-19 pandemic, provides health care professionals with essential knowledge to deliver skilled telehealth services with competence and care.

FAU's College of Nursing recently launched a new scholarship program through the support of Florida Blue Foundation and the Frederick A. DeLuca Foundation. The first-of-its-kind Health Equity Nursing Scholars (HENS) Program is designed to improve health equity in communities nationwide.

HENS will support a cohort of eight diverse, exemplary BSN students and two MSN students each year.

Today, FAU's College of Nursing enrolls more than 1,370 students in its four nursing degree programs on the Boca Raton, Davie and Harbor Branch campuses. The college has more than 9,182 alumni. More than 85 percent of them reside in Florida and provide vital health care services in the region.



Historic \$28M Scholarship Gift Initiates Goal for 'Doctors Without Debt'

\$28 million estate pledge from John and Ann Wood to support student scholarships in FAU's Schmidt College of Medicine is a giant step forward to break down financial barriers for aspiring doctors. This is the largest scholarship gift in FAU's history and the largest known scholarship gift to a Florida public university's medical school.

This transformative gift in memory of their son, Robert A. Wood, will create the opportunity for debt-free tuition, which is only available from a handful of medical schools across the country. John and Ann Wood's mission – "doctors without debt" – is their hope to inspire others to help cover the tuition of every FAU medical school student. The current cost of in-state tuition and fees per medical student for

one year is \$35,000, which amounts to \$140,000 for four years.

This marks the third gift to FAU's College of Medicine from the Wood family. Their previous gift in 2021 established the Robert A. Wood



FAU Medical Scholars Fund and was created to support 10 medical students through all four years of medical school. In 2022, they increased their impact, providing scholarship support to 20 additional students for a total of 30 medical students. Their \$28 million estate pledge expands on that initial commitment.

"I am humbled by your most generous donation. While I cannot offer anything but my sincerest gratitude for now, I promise to pay it forward someday just as you have, Mr. and Mrs. Wood," said Ivan Grela, a second-year medical student and Woods Scholar.

"You are angels in disguise and I cannot say thank you enough – merci, gracias, danke, toda – thank you for believing in us."

The world has
Doctors without
Borders. We want
doctors without debt.





estled on Florida Atlantic's Boca Raton campus is a shining gem of K-12 education. A top-ranked school in the nation, A.D. Henderson University School and FAU High School is a public laboratory school leading the way in STEM education. The school recently opened a brand new, state-of-the-art facility further enhancing its national reputation for excellence and innovation.

During a pivotal moment in public education, the A.D. Henderson and FAU High model is built on the premise of access and affordability, fracturing the cycle of poverty through extraordinary outcomes. The program, which is affiliated with FAU's College of Education, equips all students, regardless of financial circumstances, gender or race, with the necessary skills for an ever-evolving job market. The mission of A.D. Henderson and FAU High is to reshape education in America and to replicate this unique model throughout the state and the nation.

"The long-term success of our country is dependent on our public school system – and that system has been significantly compromised," said Joel Herbst, Ed.D., superintendent of FAU Lab Schools. "We are here to develop programs and strategies to combat the decline."

A.D. Henderson University School was originally funded by a gift from the A.D. and Lucy Henderson Foundation in 1968. In 1991, the Florida Legislature designated developmental research (lab) schools at four state universities —

including FAU — as independent public school districts under the auspices of the State University System. A.D. Henderson is currently the No. 1 lab school in Florida, according to the Florida Department of Education rankings, and was named the No. 2 public elementary school in the country by Niche. It also is the No. 1 public school in the state for developing National Merit Scholars — and 15 percent of those scholars are Title I, or low-income, students.

In 2018, A.D. Henderson received its second National Blue Ribbon distinction awarded by the U.S. Department of Education. The coveted National Blue Ribbon award affirms the hard work of educators, families and communities in creating safe and welcoming schools where students master challenging and engaging content. In 2019, A.D. Henderson and FAU High was named a Green Ribbon School District Sustainability Awardee by the Department of Education. This national recognition was given based on innovative efforts to reduce environmental impact and utility costs, improve health and wellness, and ensure effective sustainability education.

Established by FAU's Board of Trustees, FAU High School opened in 2004. The highly selective, merit-based program at FAU High serves as an early college prototype. Students spend their ninth-grade year in a high school classroom taking advanced coursework. This prepares them for grades 10-12, where all classes are collegiate courses taken at the university for both high school and college credit.



Premier STEM Program

he Cane Institute for Advanced Technologies serves as FAU Lab Schools' epicenter for STEM education, research and technology transfer. Established in 2018 with a \$1 million gift from Daniel and Debra Cane, the Cane Institute has become one of the premier STEM programs in the country. The Institute's integrated approach allows students and faculty at all grade levels to explore today's most complex challenges in areas such as biodesign, synthetic biology, cybersecurity, autonomous vehicles, robotics, virtual reality, augmented reality, automation and artificial intelligence.





A second location, FAU High School – Jupiter Campus in partnership with Max Planck Academy, welcomed its first students in 2020. This location allows for the brightest high school students to work side-by-side with preeminent scientists at one of the world's leading neuroscience research institutions. The first cohort of 23 students graduated in May.

"We are offering exceptional high school students an extraordinary opportunity to work alongside renowned scientists," Herbst said. "It is the only program of its kind in the world."

FAU High's partnership with FAU gives students the opportunity to simultaneously earn their high school diploma and a cost-free bachelor's degree. Often this means students will graduate with their bachelor's degrees a week before receiving their high school diplomas. It paves the way for students to graduate college debt-free, primarily with high-demand STEM degrees.

The FAU High School Research Program exposes students to research and scholarly inquiry in a variety of disciplines to ignite their curiosity and create solutions to local, state, national and international problems. More than 60 students have published their research in peer-reviewed journals, including the *New England Journal of Medicine*. Their research is referenced and cited globally, allowing other scientists to build off our students' knowledge and further research worldwide.

Teacher training has always been a top priority for A.D. Henderson and FAU High. A recent transformative gift by David J.S. Nicholson established the Stiles-Nicholson STEM Teacher Academy on the Boca Raton campus, which aims to bridge the high-caliber research setting with middle and high school teachers and students, and will provide premier experiential STEM training programs for educators throughout the region — and ultimately, the state and nation.

A reimagined campus is in the works in Boca Raton, thanks to \$43.8 million in state funding, and university and philanthropic contributions of \$9.3 million. Phase I of this incredibly modern and innovative campus opened this fall. It consists of:

- Flexible-use classrooms
- Wet and dry science laboratories
- Media and digital arts center
- Open flex spaces
- Multi-use athletic center and gymnasium for athletics and STEM
- Outdoor environmental learning
- Indoor and outdoor dining

Construction will continue with Phase II focusing on state-of-the-art STEM facilities to house world-class programs including:

- Outdoor athletic complex Olympic size track and field
- Institute for Biodesign
- STEM Center and auditorium
- District STEM Teacher Training Center
- AquaScience Center
- Aquatics Center

"We can no longer build the education of tomorrow with the facilities of yesterday," Herbst said. "We are in an era of unprecedented expansion for A.D. Henderson University School and FAU High School as we are leading the national charge in education re-design. Our reimagined campus and tried-and-proven educational platforms will be the blueprint on how to reshape education in America."

DEFENDING DUR NATION BY LAND, AIR AND SEA

FAU Researchers at the Forefront of Scientific and Technological Advances

BY GISELE GALOUSTIAN



■ he United States is increasingly under threat, from foreign and domestic terrorism to cyberattacks and the pervasive spread of misinformation. During World War II, Florida Atlantic's 5,800-acre Boca Raton campus served as an airbase for radar training by the U.S. Army Air Corps, doing its part to help win the war. Now, it's only fitting that researchers across the university are doing their part to help defend our nation by land, by air and by sea.

Aiming skyward, FAU scientists are using quantum physics to combat hacked bank and social media accounts, energy grids and medical records that threaten the security of the nation's health, money, energy, society and infrastructure.

Researchers

are leading America's

efforts to deliver the first

drone-based, mobile quantum

network to seamlessly

maneuver around buildings,

inclement weather and

changing environments

such as warfare.

By harnessing the laws of nature,

they are developing a cuttingedge teleportation technology

to take cybersecurity to new, "unhackable" heights using minuscule particles of light or "beams."

In concert with Qubitekk, L3Harris and the U.S. Air terrain and quickly adapt to Force Research Laboratory (AFRL), FAU is entrusted by the U.S. Office of the Secretary of Defense to lead America's efforts to deliver the first drone-based, mobile quantum

network to seamlessly maneuver around buildings, inclement weather and terrain, and quickly adapt to changing environments such as warfare.

The network includes a ground station, drones, lasers and fiber optics to share quantum-secured information. Today's telecommunication networks use fiber optics, connected by laser beams from the ground and between planes and satellites — called fiber and free space optical networks. Drones are used to save lives, secure infrastructure, help the environment and thwart hostile military advances.

"The combination of quantum communication and unmanned aerial systems or UAS in this project represents an important advance in the Air Force's efforts to create fieldable quantum systems for the warfighter," said A. Matthew Smith, Ph.D., a senior research physicist at the AFRL Information Directorate. "Additionally, the potential of secure communication from a portable quantum communication UAS in contested environments represents important future capabilities for the Air Force."

At the helm of this project is FAU's Warner L. Miller, Ph.D., a professor of physics in the Charles E. Schmidt College of Science and a retired lieutenant colonel, U.S. Air Force, who served honorably for 28 years and received a Meritorious Service Medal with Oak Leaf Cluster.

"In war, for example, these drones would provide onetime crypto-keys to exchange critical information, which spies and enemies would not be able to intercept," Miller said. "Quantum protects our information using the laws of nature and not just by a clever manmade code. One of our collaborators aptly stated, 'whoever wins the quantum race will win the war."

Along these lines, FAU's Center for Connected Autonomy and Artificial Intelligence (CCAAI) is developing a new generation of networked, cooperating robots and the nation's first-of-its-kind testbed platform to connect them using extremely high-speed millimeter wave links.

These high-frequency radio waves (30 to 300 gigahertz), until more recently, were primarily used for remote sensing, radio astronomy, automotive radar and security screening.



Above: Reinaldo Dos Santos, left, and Vitor Prado Correia, graduates of FAU's Department of Ocean and Mechanical Engineering, extruding fiber in the laboratory under the direction of Hassan Mahfuz, Ph.D., principal investigator, and Oren Masory, Ph.D., co-principal investigator of the body armor project.

From left: FAU graduate student Anthony Davis; Warner A. Miller, Ph.D.; and collaborator Pedram Nimreezi, stand behind the large drone, which includes a network of a ground station, lasers and fiber optics.

Under the leadership of the CCAAI's director, Dimitris Pados, Ph.D., Schmidt Eminent Scholar Professor in the College of Engineering and Computer Science and a fellow of FAU's Institute for Sensing and Embedded Network Systems Engineering (I-SENSE), researchers are developing new multi-agent learning algorithms executed over the networked robots, as well as protocols for networked robotic team operation.

Because data is the fuel to train and operate AI systems, the researchers also are evaluating data quality. To train the robots, they are using curated data sets developed under a project funded by the U.S. Air Force Office of Scientific Research, which is aimed at evaluating data quality and suppressing faulty entries. They also are working to stop saboteurs' attempts to inject faulty data to mislead autonomous systems by carrying out real-time operational data monitoring.

"Whenever you have faulty robots or a faulty autonomous system, it usually is the data that is at the root of the problem," Pados said. "We are developing novel theory and algorithms to identify values in data that don't conform to or make sense when they are correlated with each other, to serve as a warning system to let humans know that something is off."

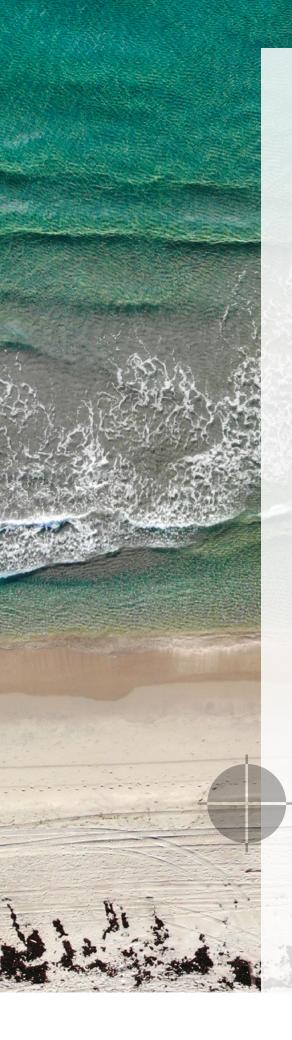
On the ground, FAU researchers are developing and enhancing body armor materials to improve the performance of military helmets and body armor. Their secret weapon? Advanced composite fibers that will potentially lead to greater energy absorption and ballistic performance, and ultimately, greater protection of the women and men who serve in the U.S. military.

Ballistic or bullet-proof armor performance is heavily dependent on the base material properties, which have changed little in recent years. The fibers in an armor absorb ballistic energy and dissipate it as quickly as possible when the projectile strikes. Fiber strength, modulus and fracture strain are key parameters for absorption and dissipation.

The project, spearheaded by College of Engineering and Computer Science professors Hassan Mahfuz, Ph.D.; Oren Masory, Ph.D.; and Leif A. Carlsson, Ph.D. was supported by a grant from the Combating Terrorism Technical Support Office, under the U.S. Department of Defense.

"Although current body armor provides increasingly advanced protection to our soldiers, it comes at a cost. It's heavy, cumbersome, and way above the desired aerial density, which limits mobility and physical performance of our soldiers," Mahfuz said. "We are hopeful the hybridized nanocomposite fiber we are developing will help to take body armor to the next level."

Undersea, goliath groupers, which can reach up to 700 pounds, may be key to national security. Scientists from FAU's Harbor Branch Oceanographic Institute have been awarded up to \$5 million from the Defense Advanced Research Projects Agency (DARPA) as part of the Persistent Aquatic Living Sensors (PALS) program. This new, bio-centric PALS technology will augment the U.S. Department of Defense's existing, hardware-based maritime monitoring systems and greatly extend the range, sensitivity and lifetime of the military's undersea surveillance capabilities. (continued on page 50)



FAU and Naval Surface Warfare Center Partner to Protect U.S. Coastlines

Spanning 8 acres of land between the Atlantic Ocean and the Intracoastal Waterway, FAU's SeaTech campus – The Institute for Ocean and Systems Engineering – in Dania Beach builds on more than five decades of excellence and is home to the nation's first undergraduate ocean engineering program.

Research and technology development at SeaTech focuses on acoustics, marine vehicles, hydrodynamics and physical oceanography, marine materials, nano-composites, applied ocean systems and ocean energy technologies.

Part of FAU's Department of Ocean and Mechanical Engineering, SeaTech has a long-term partnership with the Naval Surface Warfare Center – Carderock Division and its South Florida Ocean Measurement Facility, which extends offshore south of Port Everglades. The partnership provides extensive combined in-water testing and evaluation capabilities for unmanned underwater vehicles (UUV) and other underwater systems.

In 2018, FAU received a U.S. Office of Naval Research grant for autonomous unmanned marine vehicle platforms for coastal surveillance, coastal surveys, target tracking and protection of at-sea assets. The five-year project entails developing unmanned surface vehicles that serve as "motherships" for UUVs and aerial drones, thereby enabling multi-vehicle, multi-domain capability that may serve as a mobile coastal monitoring system, as well as training and educating graduate and undergraduate students in ocean engineering.

Within the last decade, interest in UUVs as part of specific military, industrial and academic missions and applications have increased due to technological innovations and the evolution of their sensor payloads. Missions such as persistent surveillance, anti-submarine warfare, oceanography and mine countermeasures are among key advantages of utilizing UUVs as compared to other platforms.

The project leverages FAU's ongoing Naval Engineering Education Consortium effort in conjunction with the Naval Surface Warfare Center in Panama City, which involves use of two UUVs for adaptive subsurface sensing to detect objects on the sea bottom.

Manhar Dhanak, Ph.D., principal investigator, SeaTech director, and chair and professor, Department of Ocean and Mechanical Engineering, is spearheading the project with a team of engineers, a postdoctoral associate, and graduate and undergraduate students at SeaTech.

"We are developing a multi-vehicle system that can safely and reliably navigate coastal waters with a high level of autonomy while performing assigned tasks," Dhanak said.



While many species of fish produce sound, the goliath grouper, which can reach up to 700 pounds, generates characteristic low-frequency sounds when they mate as well as when they are approached by divers. The "boom" sounds that they make are acoustically distinct from other species of groupers.

(continued from page 48)

"Grouper Guard," FAU's four-year PALS project, was developed by Laurent Chérubin, Ph.D., a research professor; and Matt Ajemian, Ph.D., an assistant research professor, both at FAU Harbor Branch. Grouper Guard records and analyzes vocalization cues from goliath groupers and then sends alerts to a remote end user.

Although many species of fish produce sound, goliath groupers generate characteristic low-frequency sounds when they mate as well as when they are approached by divers, assumingly due to distress. The "boom" sounds that they make are acoustically distinct from other species of groupers.

"Our non-invasive undersea surveillance and monitoring technologies will be subtly integrated into goliath grouper habitats," said Chérubin, principal investigator. "An acoustic response will alert authorities to the presence of a potential threat or intruder, or indeed to any object that is suspicious or 'out of place' within this species' usual visual and acoustic landscape."

From the ocean surface to the deep seafloor, bioluminescent creatures are found throughout marine habitats. This "glowing" energy released from chemical reactions emitted by these organisms is used to warn or evade predators, lure or detect prey and communicate with members of the same species.

Research surrounding bioluminescence will soon serve as an important tool to protect U.S. coastlines. In 2020, FAU Harbor Branch's Michael Twardowski, Ph.D., principal investigator and a research professor, received an \$11,179,001 four-year contract from the U.S. Office of Naval Research (ONR) to develop a

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FAU Harbor Branch researcher
Michael Twardowski, Ph.D.,
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assessments.

next-generation, high-intake, compact, defined excitation bathyphotometer sensor for natural oceanic bioluminescence assessments.

e of The contract involves imaging, modeling and significant fieldwork to better understand bioluminescence dynamics in the ocean. Nearly all coastal and open ocean regions, particularly waters with high productivity, have conditions favorable for bioluminescence emission at night.

Bioluminescence can be detected remotely, above water, with the naked eye or with camera systems. No current bioluminescence measurement system has the ability to measure the full light emission potential of the organisms in the water column. Existing bathyphotometers with low flow rates are typically relevant only for passive phytoplankton, usually found near the water's surface. The project, "Next Generation Sensor Systems for Natural Oceanic Bioluminescence Assessments," was competitively procured under the "Long Range Broad Agency Announcement (BAA) for Navy and Marine Corps Science and Technology," under the purview of the ONR.

"Working with the U.S. Office of Naval Research and our academic and corporate partners, we are not only developing a next generation 'gold standard' sensor that will be compact and versatile in deployment, but continuing a legacy of research in oceanic bioluminescence and its role in ocean ecology," Twardowski said. *



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PROFESSIONAL DEVELOPMENT

2020 FINANCIAL TIMES RANKINGS





Military Mindfulness

Ensuring Success for Veterans

BY ALYSE COOKE

lorida is home to nearly 1.5 million military veterans — the third-largest veteran population in America. Thanks to the G.I. Bill, thousands in this community are able to further their education at nationally ranked institutions, including Florida Atlantic University.

In 2020, Florida Atlantic's student population of military veterans, dependents, active-duty, National Guard and Reserve members, grew to encompass nearly 5 percent of the University's total enrollment — a number that continues to increase along with FAU's service-related support.

"FAU has invested in the resources to support veterans and dependents," said Donald Gabriel, director of FAU's Office of Military and Veterans Affairs. "By establishing a center to process all VA requirements for students to use their benefits, we help streamline processes and ease students' transition from military to campus life."





Of the many resources offered to veteran students, the majority are rendered by FAU's Office of Military and Veterans Affairs, which oversees administrative tasks such as financial aid registration and enrollment certification. Working in tandem with this office, the Military and Veterans Student Success Center provides support in a more holistic form by offering services such as peer-to-peer tutoring and mentoring. Closely aligned with both areas is FAU's student organization, the Veteran Owls, which organizes valuable social engagement opportunities including networking events, tailgates and ruck marches, which are military-style hikes with added weight from rucksacks or backpacks. The FAU ROTC program also provides top-tier leadership instruction for students who wish to become commissioned officers upon graduation. Together, these resources form a central hub for military-affiliated students to succeed at all they seek to accomplish.

"Attending a veteran-friendly school that empowered students with military backgrounds was high on my priority list," said Jaxon Crosby, a veteran dependent pursuing a bachelor's degree in health science. "FAU is annually voted as one of the most military-friendly schools and that definitely played a role in my decision to attend."

Based on the value delivered by FAU's Military and Veterans Student Success Center, the University has been recognized as Military Friendly for 11 consecutive years. Moreover, it earned two "Gold" designations and, in 2022, was further recognized as a Military Spouse Friendly School for providing sustainable and meaningful education pathways for military spouses and dependents. These achievements are not only important signifiers of success for those seeking an education, but they also provide valuable benchmarks and goals for the University, when it comes to increasing support for students who have served in the armed forces.

As part of FAU's Side-by-Side: Career Readiness Program, veteran students receive comprehensive support throughout the entirety of their enrollment to reach their career goals.

"I met with a career counselor and used several resources at the Career Center, including resume writing, career fairs, career advice, access to jobs and internships, interview practice, and even getting a professional headshot taken," said Meghan Ross, an Army veteran pursuing a bachelor's degree in health science. "I also participate in VA work-study at the office and get real work experience assisting other veterans."

The FAU College of Business plays another predominant role in promoting veteran success. As a network partner of the Veterans Florida Entrepreneurship program, the University takes great pride in its ability to help veterans realize their dreams of becoming business owners. In 2022, the College was ranked No. 21 nationally by *U.S. News & World Report* for Best Online Business Programs for Veterans, as well as No. 58 for Best Online MBA Programs for Veterans. Given that many veterans, service members and dependents require flexibility in their educational pursuits, FAU's acclaimed online offerings provide manageable pathways that increase their prospects for success.

In recent years, researchers have further explored the importance of on-campus veteran programs, and many have affirmed the need for distinct initiatives that cater to the service member community. Fortunately, there are many ways for universities to help veteran students adapt and thrive. At FAU, these strategies take several shapes, from the aforementioned offices and programs to the critical investigations of treatment methods for service-connected conditions, which is another crucial component for addressing the needs of veterans.



Researchers in the Christine E. Lynn College of Nursing are working on numerous military-related health initiatives that seek to positively influence outcomes for both individuals and the overarching systems of care for our nation's military population. Cheryl Krause-Parello, Ph.D., a professor and interim associate dean for nursing, research and scholarship and member of the Stiles-Nicholson Brain Institute, is working to advance existing research related to mild traumatic brain injuries (TBIs) affecting veterans and their families. In 2022, her project received a \$250,000 award from the Patient-Centered Outcomes Research Institute to continue creating a veteran-centered TBI roadmap that eliminates "one-size-fits-all" approaches and ensures optimal health outcomes.

"Veteran students are involved in a lot of our projects," Krause-Parello said. "In fact, all our projects are open to veteran students, alumni, or faculty and staff who are veterans. We also have online studies in which any veteran in the country can participate."

In addition to these core projects, the work stemming from the Lynn College of Nursing connects with broader efforts led by the Veterans' Action League (VAL) to improve veteran health care on a national scale. Since 2017, FAU and the VAL have been hosting critical think-tank sessions designed to engage key stakeholders including veterans, military members, social workers, doctors and other experts. Through this collaboration, vital health projects are making a tremendous difference in the lives of veterans, such as with the development of an interactive toolkit that allows users to identify available health resources in their area.

One of the most successful initiatives associated with the FAU/VAL partnership is the Canines Providing Assistance to Wounded Warriors (C-P.A.W.W.®) program. The primary mission of C-P.A.W.W. is to comprehensively

advance interdisciplinary research, education and practice protocols for wounded warriors and veterans through the development of evidence-based and restorative interventions — particularly those involving canine assistance.

"Our end goal is to keep veterans healthy and engaged," said Krause-Parello. "C-P.A.W.W.'s research is showing that veterans and active duty military are experiencing stress reduction when interacting with a canine, whether it's a service dog, a companion animal or personal pet."

Another component of C-P.A.W.W. is the FAU Veteran Canine Rescue Mission, which matches veteran students and alumni with dogs from the Humane Society of Broward County. The dogs receive professional training from Happy With Dogs to prepare them for placement as service, emotional support or companion animals. The program includes an additional research component on the human-canine bond, advancing our understanding of how canines can improve the cognitive and psychological wellbeing of people living with post-traumatic stress disorder. The first FAU student to participate in the program, 26-year-old Marine Corps veteran Lenny Polidor, was matched with a 3-month-old American Bulldog-Labrador mix in March. He described the match as "love at first sight" and the pair immediately bonded through the adoption and training processes.

Above all, the common thread throughout each FAU initiative for veterans is an emphasis on holistic achievement. Whether a student is looking to establish their own business or improve their wellbeing with a canine companion, the University prides itself on offering meaningful and impactful ways for veterans to succeed beyond their service. As the South Florida veteran community continues to grow, FAU will continue to provide our nation's heroes with the best available resources to help them advance to the next phase of their careers and lives. ❖







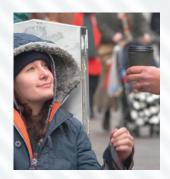


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COURTNEY JONES, DMA

The Arts at FAU Return to the Stage After the Pandemic

BY LISA METCALF



The Dorothy F. Schmidt College of Arts and Letters is recognized as a regional hub of creativity showcased by its performing and visual arts. When, in 2020, the COVID-19 pandemic brought all of that talent to a screeching halt, the impact was deafening. Now two years later, the College has brought its talents back to the stage — and back into the hearts of its valued guests.

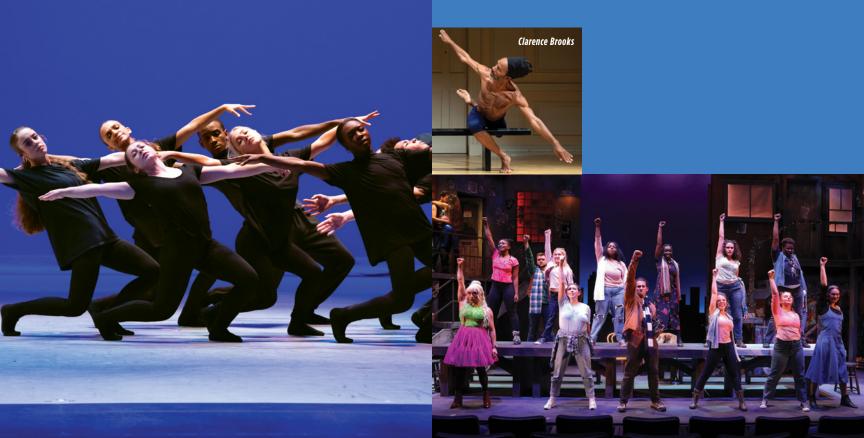
"I am pleased to welcome everyone again to live, in-person programming at the Dorothy F. Schmidt College of Arts and Letters," said Michael Horswell, Ph.D., dean of the college. "This is an exciting season of music, exhibitions, theater and lectures, all produced and performed by our talented students, faculty and professional guest artists and scholars. We are happy to be a hub of arts and culture research and creativity, while offering top quality and affordable entertainment to our FAU community and beyond."

The college houses many public performance and exhibition spaces, including the 500-seat University Theatre; two black box, or smaller, more simple theaters; and FAU's resident professional theater company, Theatre Lab. FAU is one of only a handful of universities that have a professional theater company on campus, which is a benefit for students and the community alike.

These intimate venues typically host more than 50 concerts, eight to 12 different theater performances, three dance performances and numerous lectures annually. There are also two galleries on campus – the Schmidt Center Gallery and the Ritter Art Gallery – each of which present four to six exhibitions during the academic year.



Theatre & Dance



Theatre Lab's upcoming season includes a three-play MainStage series of world premieres, and the annual Theatre Lab New Play Festival in the Heckscher Stage theater space at FAU's Boca Raton campus.

"Theatre Lab's mission to develop, create and produce new work, artists and audiences for the American theater continues and deepens with our upcoming MainStage season," said Matt Stabile, producing artistic director of Theatre Lab. "We continue our commitment to new work by bringing world premiere productions to the South Florida theatrical community."

The MainStage season begins with a National New Play Network (NNPN) Rolling World Premiere of "Dorothy's Dictionary" by E.M. Lewis. The two-person show tells the story of Dorothy, an ailing librarian, and Zan, a 15-year-old boy, who has been sentenced to community service for a violent act he committed at school. Ultimately, it's a story about how literature and friendship can open new worlds.

The second production in the MainStage series features another world premiere, "Last Night in Inwood," by Alix Sober. Stabile directs this comedy about the end of the world.

The final production features another NNPN Rolling World Premiere, "Refuge," which was co-created by Satya Jnani Chávez and Andrew Rosendorf with translations by Mari Meza-Burgos. Originally commissioned by Curious Theatre Company in Denver, the play uses puppetry and original music to tell the bilingual tale of a young Honduran girl crossing the border into Texas.

In addition, visiting playwrights will offer workshops throughout the season and the annual New Play Festival (March 10-12, 2023) offers a weekend of readings of new

works with playwrights in attendance. The festival will include a new play from Theatre Lab's Fair Play Initiative, a commission and development program for LGBT plays and stories made possible by generous funding from Our Fund Foundation.

The Department of Theatre and Dance presents four live productions and two dance performances for 2022-23. "The Wolves," a play by Sarah DeLappe, was the first production this fall. The 2017 Pulitzer Prize finalist is a comedic and bracing portrait of young women coming of age in contemporary America. The department also stages "Violet," a musical with books and lyrics by Brian Crawley and music by Jeanine Tesori. It tells the story of a young girl's journey from North Carolina to Tulsa, Oklahoma, as she learns about love and courage and what it means to be an outsider.

Spring productions include "Polaroid Stories" by Naomi Iizuka, a visceral blend of classical mythology and reallife stories told by street children; and "Sweat" by Lynn Nottage, the 2018 Pulitzer Prize-winning play that examines the collision of race, class, family and friendship at a pivotal moment in America.

The first dance performance is "Nut/Cracked" in which David Parker and The Bang Group, a New York-based contemporary dance company, join FAU's Repertory Dance Theatre Ensemble and FAU Dance minors for this hilarious rendition of the holiday classic.

Clarence Brooks, associate professor of dance, directs "Dances We Dance," the capstone experience for students enrolled in all genres and levels of dance at the university.

"We were thrilled to welcome back our audiences," said Tom Shorrock, chair of the FAU Department of Theatre and Dance. "There is nothing like live theater and dance."

Don't miss these performances



THEATRE

"Dorothy's Dictionary" presented by FAU's Theatre Lab Saturday, Nov. 19 – Sunday, Dec. 11

DANCE

Nut/Cracked

Friday, Dec. 9 and Saturday, Dec. 10

David Parker & The Bang Group, a New York-based contemporary dance company, and FAU's Repertory Dance Theatre Ensemble and FAU dance minors, perform The Bang Group's "Nut/Cracked," a hilarious rendition of the holiday classic mixing Tchaikovsky's original score with music by Duke Ellington, Glen Miller and others.

FAU also will present more than 50 concerts throughout the upcoming season. For those interested in some jazz melodies, Courtney Jones, DMA, assistant professor of trumpet and artistic director of jazz at FAU, performs with the Jazz Orchestra in "Back to Basics: A Tribute to Miles Davis," as well as in "An Intimate Evening of Jazz," with the FAU Jazz Combos.

Jones recently made history when he played with the Gateways Orchestra in its debut at Carnegie Hall in New York City. The Gateways Orchestra performance was the first time in history that an all African-descended orchestra was invited to play the iconic venue.

Founded in 1993, Gateways has become the nation's most prestigious all Black orchestra, performing classical music by both canonical European composers as well as African-American and other black diasporic composers who have enriched the tradition since the 19th century. Gateways' musicians come together from all over the country to perform at several venues across the United States during the year.

Beyond jazz, there are concerts for music lovers of all genres. FAU's Commercial Music Ensemble presents "Summer of Soul, 1969: A Retrospective," featuring the music of Gladys Knight, Mongo Santamaria, The Temptations, Stevie Wonder, Sly and the Family Stone and others, with narration by Candace Cunningham, assistant professor of history.

FAU's Commercial Music program includes the oncampus recording label Hoot/Wisdom Recordings. Its label has produced more than 30 albums.

For classical music lovers, the Symphony Orchestra, under the direction of Laura Joella, DMA, presents several concerts throughout the year, including "Joy in Motion, Orchestral Dances" and "Music that Moves You."

Also, the Wind Ensemble, under the direction of Kyle Prescott, DMA, presents "Roads Less Traveled" and "Unifier," a concert that includes interaction with the audience through their mobile phones.

The season also includes performances with FAU's Chamber Singers, Women's Chorus and ¡Cantemos!, an ensemble that specializes in the choral music of Latin America; as well as shows with other smaller Florida Atlantic ensembles, including the FAU Salsa and Latin Jazz Ensemble and the Opera Theatre Workshop Ensemble.

Performances by Florida Atlantic's renowned faculty include a vocal recital with Monica Berovides-Hidalgo and separate piano performances by Kuo-Pei Cheng-Lin and Irena Kofman, DMA, director of piano studies. Kofman is in concert with "Irena Kofman and Friends" before heading to Taiwan on a six-month Fulbright scholarship.

"Our critically acclaimed faculty members have performed and taught all over the world," said Kevin Wilt, DMA, chair of the Department of Music. "Our students and the community benefit from their knowledge and the mastery of their art."

Don't miss these performances



MUSIC

"Back to Basics: A Tribute to Miles Davis" with Courtney Jones, DMA, and the FAU Jazz Orchestra Thursday, Nov. 10, 7 p.m.

"An Intimate Evening of Jazz" with Courtney Jones, DMA, and the members of FAU Jazz Combos Tuesday, Nov. 15, 7 p.m.

"Joy in Motion, Orchestral Dances" with the FAU Symphony Orchestra Thursday, Nov. 17, 7 p.m.

"A Choral Tapestry" with the Schola Cantorum of Florida and FAU Chamber Singers Saturday, Nov. 19, 7 p.m.

"Roads Less Travelled" with the FAU Wind Ensemble Wednesday, Nov. 30, 7 p.m.





In the area of visual arts, three art exhibitions will acknowledge and celebrate the careers of Florida Atlantic faculty members who are retiring from the university after more than 20 years.

"Surplus Reiterations," featuring Rod Faulds, director of the University Galleries, is a collaboration with Letty Bassart and Tom Scicluna, both Miami-based artists. The exhibition engages objects sourced from the university's surplus operations, where furniture and other items are left.

"Porous Boundaries," by Carol Prusa, professor of visual arts, exhibits her work with graphite pours and geometry. Prusa's work has been represented in Taipei, Shanghai, London, Geneva and throughout the United States.

"To Be Continued," by Tammy Knipp, associate professor of

art, investigates the concept of bioremediation, a biological degradation process that is a method of reducing pollution. Knipp has been included in several international and national juried exhibitions.

Florida Atlantic will also host "southXeast: Contemporary Southeastern Art," an exhibition that presents emerging and under-represented artists from the Southeastern states to produce a myriad of approaches to contemporary art making.

"I truly appreciate our patrons, as their attendance at our exhibitions and events sustains the education of the next generation of artists, performers and scholars," Horswell said. "We can't wait to see more of our valued guests in our venues as we all continue to enjoy the experience of 'Arts and Culture in Paradise' at FAU." *

Upcoming Events



VISUAL ARTS

Three exhibitions acknowledge the careers of three retiring visual arts faculty members:

"Porous Boundaries," Carol Prusa

Now - Dec. 16

"To Be Continued," Tammy Knipp

Now - Dec. 16

"Surplus Reiterations," Rod Faulds, Tom Scicluna and Letty Bassart. Now – Nov. 6

NJO

For more information or to purchase tickets for these events, visit www.fauevents.com.

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Sandy Owls Soar

Florida Atlantic's Beach Volleyball Team Celebrates Historic Season

BY KYLIE MAGAR AND KATRINA MCCORMACK

The "Sandy Owls" beach volleyball team made university history in May with $oldsymbol{1}$ its first NCAA National Championship appearance on the beaches of Gulf Shores, Alabama.

As the No. 8 seed in the NCAA Tournament, the Owls knocked off ninth-seeded Stanford in the opening round, 3-0, marking the team's first NCAA Tournament win. Florida Atlantic advanced to the Elite Eight and finished the season with its best-ever national ranking, coming in at No. 8 in the American Volleyball Coaches Association (AVCA) and CollegeBeachVB.com national polls.

"Earning a bid to nationals was the team's season-long goal but winning and showing the country FAU beach volleyball can compete with any team was the dream," said team member Mackenzie Morris. "The team was actually very excited and confident going into our game against Stanford. Even though [Stanford] is known for having an amazing program, we were excited to play a team who didn't know anything about us, and we felt our style of play would do well against them."

The Sandy Owls finished the 2021 season ranked 14th nationally after winning the CCSA (Coastal Collegiate Sports Association) Championship. The team narrowly missed a bid to nationals that year, when the field was limited to eight teams. The number of teams was expanded to 16 this year, and FAU was consistently ranked in the top 12 all season long. However, an early exit at the inaugural 2022 Conference USA Beach Volleyball Championship Tournament put the team's hopes in jeopardy. Fortunately, the Sandy Owls' hard work paid off and Florida Atlantic was one of two at-large teams selected from the East Region.

"It felt so surreal getting the bid to nationals," said Erica Brok. "The emotions became extreme once we found out that we made it to nationals. All of us were shocked, excited and grateful. None of us could sit still."

ACH VOLLE



YBALL

BEACH VOLLEYBALL





Together, Brok and Morris are the winningest pair in FAU history. They were named AVCA First Team All-Americans for the second time and Conference USA Pair of the Year. Brok also was named to the 2022 U.S. Beach Collegiate National Team. Other awards and accolades for the team include:

- §§ A school record in wins (23), including 10 wins over ranked opponents
- ¶ Two C-USA First Team Pairs: Brok/Morris and Courtney Moon/Marketa Svozilova
- © C-USA Freshman of the Year: Julie Honzovicova
- 🐐 Two C-USA All-Freshman Team members: Honzovicova and Svozilova
- © C-USA Coach of the Year: Capri Grotowski
- © C-USA Scholar Athlete of the Year: Christine Jarman
- § AVCA Assistant Coach of the Year: Steve Grotowski

"I have never been so proud of our team. Everyone played and cheered out of their minds," Morris said. "There was not an ounce of energy spared. Every single person on our team, on or off the court, contributed."

Completing a season to remember are nearly 15 women who climbed to new heights in 2022 and left the beaches of Alabama expecting to return for the 2023 season. *



ERICA BROK MARKETA SVOZILOVA CAPRI GROTOWSKI



A Lasting Legacy

Beach Volleyball Head Coach Capri Grotowski passed away in June at the age of 38, after a battle with cancer. Her leadership and eight-year dedication helped establish the Sandy Owls as one of the top-ranked beach volleyball programs in the nation.

Capri was named the 2022 Conference USA Coach of the Year after leading the team to a program–record 23 wins and a historic NCAA Championship appearance. Ultimately, the team advanced to the Elite Eight and achieved the No. 8 ranking in the AVCA and CVBV national polls. Capri celebrated her 100th career win on April 9, 2021, her 37th birthday. Her all–time coaching record stands at 128–86.

Capri's husband, Steve Grotowski, will take over as head coach. He has been involved with the program since 2015, first as a volunteer and then as an assistant coach. Steve served as interim head coach at the 2022 NCAA National Championship, and his efforts did not go unnoticed, as the former Olympian was named the AVCA National Assistant Coach of the Year.

"We will forever be grateful for the contributions Capri made to FAU Athletics. She and Steve built the program into a national contender, and we believe Steve is the right person to continue to build upon that foundation," said Brian White, vice president and director of athletics. "As the head coach of the Sandy Owls, Steve will carry on Capri's legacy and bring a continued devotion to the development of our student-athletes, both in competition and in preparation for life after college."







A Decade of Dominance

Transition Opens Opportunities for Florida Atlantic Student-Athletes

BY KATRINA MCCORMACK

After a decade of growth and success competing under the umbrella of Conference USA, Florida Atlantic soon will compete in a new conference.

"We are incredibly excited about our future in the American Athletic Conference," said FAU President John Kelly. "Florida Atlantic has gained national recognition for academic and athletic excellence, and membership in The American will help propel the university to the next level. We look forward to welcoming our new conference rivals and their fans to beautiful Boca Raton."

The move will increase the university's national exposure in some of the top media markets in the country. The Owls will face four teams from Texas, two from North Carolina, and one each from Louisiana, Tennessee and Alabama. Additionally, for the first time, the Owls will face conference foes in Pennsylvania, Maryland, Oklahoma and Kansas, as well as in-state rival USF.

FAU's move to The American is yet another example of the university's efforts to ascend as one of the nation's top athletic programs. Florida Atlantic began competing in NCAA Division I in 1993 as a member of the Atlantic Sun Conference, then known as the Trans America Athletic Conference. The Owls moved to the Sun Belt Conference in 2004-05 and then to Conference USA in 2013-14.



Over the past decade, the Owls captured eight C-USA championships, including two each in baseball (2016, 2019), football (2017, 2019), women's soccer (2018, 2019) and softball (2016, 2018). The Owls tallied 27 postseason appearances throughout the same span, including a first-round win in the 2022 Beach Volleyball National Tournament.

"Florida Atlantic Athletics has an extremely bright future," said Brian White, vice president and director of athletics.

"We look forward to our final

also continuing our diligent

year in Conference USA, while



Conference USA Success

Florida Atlantic will soon transition from Conference USA to the American Athletic Conference.

In the past 10 years, student-athletes captured eight league titles and made 27 postseason appearances, including a firstround win in the 2022 NCAA National Beach Volleyball Tournament. Here's a year-byyear look at conference championships and postseason appearances.



Men's Cross Country: **NCAA South Regional appearance** Women's Cross Country: **NCAA South Regional appearance** Women's Track and Field: **NCAA East Preliminary Round appearance**



2015

Baseball:

NCAA Regional appearance

Women's Cross Country:

NCAA South Regional appearance Softball:

NCAA Tournament appearance

Women's Swimming and Diving:

NCAA Championship appearance

Women's Track and Field:

NCAA East Preliminary Round appearance









2016





Conference Title and Cheribundi Tart
Cherry Boca Raton Bowl
Women's Swimming and Diving:
NCAA Championship appearance
Women's Track and Field:
NCAA East Preliminary Round
appearance

Baseball:

Conference Regular Season Title and NCAA Regional appearance

Softball:

Conference Championship, Conference Regular Season Title and NCAA Tournament appearance

Cheer:

NCA Championship

Men's Cross Country:

NCAA South Regional appearance

Women's Cross Country:

NCAA South Regional appearance

Women's Track and Field:

NCAA East Preliminary Round appearance

2018









Rasehall[,]

Conference Regular Season Title and NCAA regional appearance

Football:

Conference Title and Cheribundi Boca Raton Bowl

Women's Soccer:

Conference Regular Season Title (co)

Men's Basketball:

Collegeinsider.com Tournament appearance

Men's Cross Country:

NCAA South Regional appearance

Women's Cross Country:

NCAA South Regional appearance

Women's Track and Field:

NCAA East Preliminary Round appearance

Women's Soccer:

Conference Regular Season Title

Baseball:

NCAA Regional appearance

Men's Cross Country:

NCAA South Regional appearance

Women's Cross Country:

NCAA South Regional appearance Softball:

Conference Regular Season Title









Football: Montgomery Bowl appearance



Men's Basketball:
CBI Tournament appearance
Beach Volleyball:
National Championship appearance
Women's Golf:

NCAA Regional appearance and National Championship (individual)





Tn March, Florida Atlantic announced the loss of longtime Owl Joan Joyce, **⊥**who passed away at the age of 81. Known as much for her sweet spirit as for her fierce competitive nature, Joyce was a legend in the sporting world and a trailblazer for women's athletics, setting records in basketball, golf and volleyball. She was perhaps best known as a softball pitcher who struck out baseball greats like Ted Williams and Hank Aaron.

Joyce built the FAU softball program from the ground up and was the only head coach in program history. Her ability to mentor student-athletes led the Owls to more than 1,000 wins, 12 conference titles and 11 NCAA tournaments from 1995 to 2022. She was named conference Coach of the Year eight times and is only the 27th coach in NCAA Division I history to join the 1,000-win club. Joyce also was head coach of the FAU women's golf team from 1996 to 2014.

"While Joan's legacy includes impressive accomplishments, like 20 hall of fame inductions, All-America recognitions in multiple sports and inclusion in the Guinness Book of World Records, her ability to relate and teach the sports she loved was her greatest impact," said Brian White, vice president and director of athletics. *

In honor of Coach Joyce's legacy and impact, which will be felt for decades to come, Florida Atlantic has established the Joan Joyce Memorial Fund. All proceeds will benefit the FAU softball program. For more information or to support the fund, visit fauf.fau.edu/joyce-memorial.

Next Generation Coach

In June. Florida Atlantic named Jordan Clark as head coach of the Owls' softball program. Clark comes to FAU after a successful four-year stint as an assistant coach at Ohio State.

Clark played collegiate softball at Miami (Ohio) where she was a two-year team captain, two-

time All-Mid-American Conference performer, and the 2012 recipient of the MAC's Nan Harvey Sportsmanship Award. She helped Miami to a pair of MAC Tournament titles and NCAA Tournament berths in 2009 and 2012.

"I am incredibly humbled and honored to be named head coach at FAU," Clark said. "To follow in the footsteps of a legend like Joan Joyce is a task that I do not take lightly. The legacy that Coach Joyce left on this program and on the sport of softball is immeasurable. I am excited to continue to build the program into a contender in both our conference and on a national stage."



Research and scholarly activity are on the **rise** at Florida Atlantic.



Take a look:

24%7

Increase in research expenditures
SINCE FISCAL YEAR 2018

37% 7

Increase in value of research awards received SINCE FISCAL YEAR 2018

78%7

Number of research award proposals received SINCE FISCAL YEAR 2021

167% 7

Patents issued
SINCE FISCAL YEAR 2021

117% 7

Increase in number of career awards
SINCE FISCAL YEAR 2018

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FOREVEROWLS ALUMNI NEWS AND NOTES



Recent Grad on Track to Represent College and Pro Athletes

BY DENISE GRAVATT AND PAUL OWERS

Alumna Shyra Johnson '21 made history by becoming one of the nation's youngest certified sports agents when she passed the National Basketball Players Association's Agent Certification Exam at just 21 years old.

The College of Business graduate said she is a determined trailblazer and budding entrepreneur, forging a path in the sports business industry as a strategic decision-maker and networker with a heart for giving back.

Johnson, founder and CEO of the Team Empire Sports agency, credits her parents with igniting her passion for sports business and instilling in her a fierce work ethic. Their support of her sports interests combined with their emphasis on scholastic excellence shaped her career aspirations and educational values, leading her to Florida Atlantic.



She came to Florida Atlantic as a first-generation college student and member of the Kelly/Strul Emerging Scholars Program. The program provides academically strong, first-generation, low-income students with a full scholarship and support services to help them graduate in four years or less — debt free — and prepare for successful careers.

"I chose FAU over offers from other Florida universities because of the people and the sports industry opportunities in South Florida," she said.

Before ever meeting a sports agent, Johnson began preparing for her career, participating in student clubs and organizations, building relationships, mentoring peers and being mentored, and creating networking opportunities. She was practicing to be an entrepreneur, all in a student-success-centered environment.

"I attended several different clubs looking for a good fit, but joining Delta Sigma Pi, the business fraternity, changed everything for me," she said. "I learned about the business roles in different industries, went to my very first conference and also discovered I was one of the few people interested in supporting sport business."

Realizing Florida Atlantic did not have a club focusing on the business of sport, she worked with another student to establish the university's Sports Business Association (SBA), which is dedicated to educating, connecting and inspiring future generations of sport business professionals.

Johnson also built relationships through her sports-centric social life. Many of her dormmates and friends included Florida Atlantic basketball and football players, and she would often encourage them to study hard but take breaks when needed, earning her the nickname "Mama Shyra."



Just as impressive as her drive and accomplishments is her desire to give back. She worked as a retention specialist in the university's Office of First-Generation Student Success, which supports students through the challenges of college life. She said she believes her experience navigating college as a first-generation student also helps her relate to student-athletes because many are the first college athletes in their families.

Johnson said she considers mentoring an important part of relationship-building and networking, crediting much of her success to her mentors through the Kelly/Strul Emerging Scholars Program. They helped her obtain internships with ESPN and a sports agency, and continue guiding her next career moves and business decisions.

Arthur Adler, former sports executive with the New York Yankees and New York Islanders, said Johnson's timing for entering the sports agency business is impeccable because potential clients have grown from thousands to hundreds of thousands, now that college athletes can profit from their name, image and likeness.

Adler first met Johnson in 2019 when she was an intern at the Boca West Children's Foundation and said he was impressed with her ability to grasp information and channel that to her career pursuits.

"You rarely see that in a person of her age or experience," said Adler, who has a 40year background in sports marketing and agency. "She is bright and relentless in getting to any goal she sets for herself."

Another mentor, Cecilia Peters, started meeting with Johnson once a week, and together they started a book club for Kelly/Strul scholars during the pandemic. The club remains a success two years later.

"That is what makes Shyra different,"
Peters said. "She is goal-oriented, not
afraid of hard work, not shy, and pointed
in her ambition to reach her dream.
Young athletes gravitate toward her
because she motivates and is capable
of letting other students see a world of
possibilities through her eyes. That ability
cannot be taught."

Johnson is currently working on an MBA in sport management at Florida Atlantic to meet the educational requirements for additional agent certification exams. Her vision is to develop a tech-based agency to represent college and professional athletes, she said.

"Team Empire Sports will become a world-renowned sports agency," Johnson said. "We will have a roster size that fills a classroom full of stellar, influential humans who happen to be athletes."

New Leader is 'Listening'

BY AMY BUTLER

Katie Burke, Ph.D., a four-time Florida Atlantic alumna, said she's on a "listening tour" as she starts her new role as assistant vice president of alumni and community engagement.

"My first goal is to listen and learn to discover what our community needs and wants, and then build a strategy that creates opportunities for people to become engaged in a variety of ways," Burke said.

A South Florida native and first-generation college student, Burke earned four degrees from Florida Atlantic, including a bachelor's in criminal justice, two master's degrees, and a doctorate in educational leadership and research methodology. According to the registrar's office, she is one of only 151 alumni in Florida Atlantic's 60-year history to earn four degrees from the university.

While Burke spent many years as a student, she said it was when she joined Alpha Xi Delta sorority during her second year that her involvement soared. She served as an area facilitator, where she also interacted with the chapter's advisory board volunteers.

"I have held leadership roles in higher education for close to two decades, starting with a role promoting the needs of graduate students with Student Government," she said. "I have been a consummate advocate for student success and bridging FAU to the community. In my most recent position at FAU, I led new student transitions and family engagement. I am a program developer, a people builder and a maximizer of resources. It is my immense joy to collaborate and build programs that people believe in."

Here's more about Burke and her plans to cultivate programs that engage Florida Atlantic's alumni and help its diverse network thrive.

What does being an FAU alumna mean to you?

The world. It means success and achieving new heights that I didn't think were possible. My time as an Owl taught me you can achieve anything with the right support, effort and energy.

What attracted you to this position?

I read the job description and wanted to do every single thing on the list. I've always been passionate about everything I've chosen to do. This role affords me the opportunity to channel others into that passion; to give back and engage our communities with the institution that taught me the value of hard work.

What are you looking forward to in this role?

This role is an opportunity to bring together my talents and skills to build a robust organization that meaningfully engages alumni. My background offers critical insight into FAU's dynamic student body. My roots are deeply embedded in this community and I look forward to utilizing my skills to maximize alumni success.

What do you have planned for alumni in the coming months?

Alumni should look forward to genuine engagement that energizes their affinity to Florida Atlantic. We plan to increase our outreach and offer exciting programming.

How do you plan to approach the various alumni audiences?

I am a part of the 190,000+ living undergraduate and graduate alumni, and being a four-time FAU graduate, I am keenly aware of the diversity of our people and their interests. I have partnerships in place with many niche populations within our community, and I know from my work at FAU that opportunities must be created for specific audiences.

Communication and relationship building are critical. We will be providing them with compelling information and re-engaging them in what Florida Atlantic is doing, while emphasizing our points of pride and exciting opportunities on the horizon. The colleges will be major partners in this work.

Outside of work, what do you like to do for fun?

Eat! My favorite restaurants are local spots. I also love to teach. I am an associate graduate faculty member, and I teach in the University Honors Program, as well as some higher education leadership courses. Additionally, I teach group fitness at FAU.

What else would you like alumni to know about you?

Family is everything to me. I live in Boca Raton with my husband, Mike, and our dogs, Charlie and Franklin. I have four godchildren; a Disney annual pass; and a love of corny jokes, laughing and all sorts of music.





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Tips from an Expert

Alumnus Offers Tips for Optimal Health

BY SHAVANTAY MINNIS

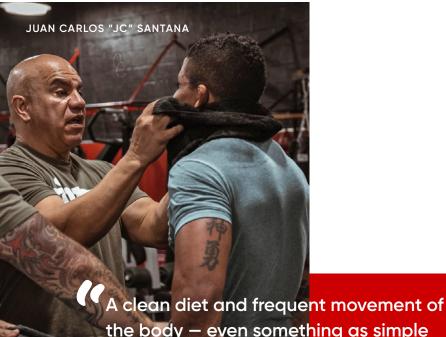
To stay healthy, Florida Atlantic alumnus and health and fitness expert Juan Carlos "JC" Santana has two key suggestions: move every day and avoid foods with excessive ingredients.

"Everybody wants to complicate health and fitness. It's really not that complicated," said Santana, a certified strength and conditioning specialist, and founder and owner of the Institute of Human Performance (IHP), a state-of-the-art fitness center located less than a mile from Florida Atlantic's Boca Raton campus. IHP was voted one of the best core gyms in the country and has been listed as a top-10 facility by outlets such as Men's Health, SELF and Women's Fitness. It also is a place for research, Santana said. He collaborates with the International Sports Sciences Association, an organization that provides education and certification for trainers, coaches, nutritionists and more, to conduct research on exercise and muscle recovery.

Santana graduated from Florida Atlantic in 1993 with a bachelor's degree in exercise science. A year later, he earned a master's degree in exercise science and became an adjunct professor shortly after that. In 2012, Santana was named the Distinguished Alumnus of the College of Education, in honor of his accomplishments.

"I loved my time at FAU," he said. "Gaining my degrees and then being able to train up the next generation of trainers, fighters and athletes meant a lot. We still partner with FAU today in IHP's international training program, where interns can gain experience working with people from all over the world."

Santana also has been involved with the strength and conditioning program for several of Florida Atlantic's sports teams over the past 10 years, including men's basketball, men's and women's cross country, track and field, volleyball and men's and women's swimming. Additionally, he authored multiple functional training fitness books and has trained professional fighters.



the body – even something as simple as walking - will produce change."

_ Tuan Carlos "TC" Santana

Here are tips that Santana believes are doable for everyone:

Q: What's the best method to lose weight?

A. For optimal weight loss, consume fewer calories than you are expending or burn more than you consume. This means lots of movement and calorie-diluted, nutrient-dense foods. Try to stay under 1,500 calories if you're a woman and 2,000 calories if you're a man.

Q: I know I should eat healthy, but what does it really mean?

A. Try to stay away from foods that have labels. Greens, vegetables and lean meats don't have labels. If you create a lifestyle filled with whole foods and lean protein, you're good to go.

Q: How long should I exercise each day to see change?

A. You have to move every day and that includes walking and standing. People see change in roughly three to four days from a weight loss perspective. That initial loss must be celebrated. And remember: with any major change, it takes time and that's a good thing because it will have lasting effects on the mind and body.

Q: Should I set goals, and how can I maintain them when I do?

A. Goals are great, but what happens when you reach them? Instead, I recommend changing the approach. When you adjust the mind to a new way of living, there is no endgame.

Q: What happens if I don't see

A. It is virtually impossible to change your lifestyle to a healthy way of living and not see progress. Anyone who has followed a reduced-calorie, healthy diet and has not dropped weight should consult a physician.

CLASS NOTES

1990s

Pilar Forero Taylor, business '97, master's in education psychology '09, is a doctoral student in FAU's College of Education. Taylor was the director of the Stiles-Nicholson STEM Teacher Academy for



FAU/FAU Lab schools. She also is the parent of two Owls, doctoral student Connor Hammock, computer science '21, and Collin Hammock, a dual-enrolled senior at FAU High School, who is studying computer science.



Seth Siegel, accounting '96, was named CEO of Grant Thornton LLP. He joined the Chicago-based audit, tax and advisory firm in 1996 and became a partner 10 years later, after leaving the firm briefly in the late 1990s. Siegel

was inducted into the FAU Alumni Association Hall of Fame in May and is a past president of the FAU School of Accounting's Advisory Board.

2000s

Todd Evans, architecture '03, serves on the U.S. Green Building Council examination writing team. He is an energy manager at the U.S. Bureau of Overseas Building Operations, focusing on energy efficiency and climate-responsive



design at U.S. embassies, consulates and diplomatic facilities around the world.



Aryeh Lehrer, communications '03, was honored with an OnCon Icon Award as one of the world's Top 50 Talent Acquisition Professionals. He is vice president for talent management, acquisition and DEI&B, at Comcast.



Al Spencer, finance '01, master's in accounting '06, was appointed as vice president, controller of JetBlue Airways, where he oversees corporate accounting, tax, payroll, accounts payable and fraud, and revenue accounting teams. He

started his accounting career at public accounting firm KPMG and served in several accounting and finance roles across industries. Prior to joining JetBlue in May, Spencer was deputy CFO North America and corporate controller for the Paris-based Air Liquide, the second-leading supplier of industrial gases.

2010s

Jonathan Beskin, MBA '15, is CEO of SinglesSwag and Paradise Delivered. In June, he donated nearly 30,000 pounds of food to Boca Helping Hands' hungerrelief efforts. The items were surplus supplies from Beskin's



monthly subscription services, which deliver 50,000 boxes of women's lifestyle items every month. SinglesSwag, founded in 2016, ranked No. 243 on the *Financial Times* 2022 list of fastest-growing companies in America. It also was named to Inc. 5000's list of fastest-growing companies at No. 181 in the U.S. and No. 9 in Florida (2020), and honoree (2021).



Christina Humphries, marketing '19, and Daniel Castilla, biology '16, electrical engineering '22, were married in May. Christina is an advising assistant in Student Academic Services for FAU's College of Business.

Stuart Halberg, MBA in sport management '11, was named CEO of Logitix, a live event ticketing technology and analytics company with offices in South Florida and Los Angeles. The company has partnerships with



concert and live event promoters, as well as NFL, NBA, NHL, MLB and NCAA teams. Halberg previously served as Logitix's senior vice president of strategy and analytics, overseeing data and product strategy. He began his career at the NHL's Florida Panthers where he served for five seasons as director of hockey operations and business analytics.



Thomas Lee, health care administration '16, promotes peace and ending domestic violence against women in developing nations in his role as human rights advocate for Latin Council for World Peace, a non-governmental organization of the United Nations.

David Tring, criminal justice '11, and Vancy Nguyen, mechanical engineering '20, were married in May at Miami Secret Gardens.



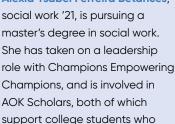
2020s



Pat Robert Archer, multimedia studies '20, works with students in Broward, Palm Beach, Martin, Saint Lucie and Indian River counties through the Archer Disability Foundation. He plans and organizes mentoring events to

promote employment of high school and college students transitioning out of school and into the community. Archer also volunteers at Florida Atlantic Alumni Association events as a photographer and videographer.

Alexia Ysabel Ferreira Betances





have experienced foster care or homelessness.

FAU SeaTech, Dania Beach campus

Did you get married, have a baby, start a new job, receive an award, or experience some other big life moment or personal victory recently? Send your news, including full name, graduation year, college or major, and high-resolution photos (at least 300 dpi) to FloridaAtlanticMag@fau.edu.

TIMEMACHINE A LOOK BACK

GAME ON

During Florida Atlantic's early years, the University Center was the hub of campus

activity. Today it is called the Student Union and it remains a popular spot for Owls on the Boca campus to relax between classes. In 2020, the facility welcomed a high-tech eSports Arena with 40 top-of-the-line gaming PCs. Classic games like pool and ping pong are also still available.



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