FLORIDA TECHNER

Forward, Together

With vision, persistence and an open door, Dr. John Nicklow takes the lead as Florida Tech's sixth president.

In This Issue

Fall 2023 • Volume 32, Issue 2

A Traditional Panther Welcome

Together with the campus community, Florida Tech's admissions and student life offices welcomed over 1,300 new Panthers to campus during Orientation Week, which began Aug. 13. Throughout the week, new students got familiar with campus and each other, attending academic and informational events, as well as camaraderie-building activities such as arts and crafts, karaoke and more as part of the university's traditional Color Wars competition (finale pictured here).



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A MESSAGE FROM THE **PRESIDENT**

Dear Florida Tech family,

I'm so proud and pleased to join you in this truly amazing place at this very special time in our history. An overwhelming sense of enthusiasm can be felt across campus as we ready ourselves to celebrate 65 years of preparing students for bright futures.

I continue to believe that Florida Tech is at an inflection point, which presents rare opportunities. Becoming the top choice for students interested in STEM disciplines and more from all over the state, nation and world is certainly within our grasp.

To make that vision a reality, we must ensure the very best student experience, grow our research enterprise and be a preferred partner for business, industry and government. Simultaneously cultivating alumni pride and philanthropic partnerships will also be foundational components critical to our shared success. How we accomplish all of that is something we will determine together.

We have launched a new visioning and strategic planning process on a tight timeline, and it will be crucial for every Florida Tech stakeholder to join with me in helping to define the specifics of our shared vision. I am committed to listening and learning. It will require focused collaboration to elevate Florida Tech and amplify our visibility and impact.

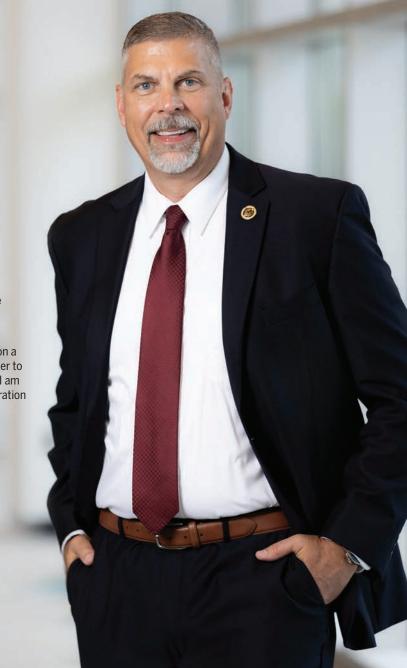
What comes next for this university? We are working together to plan that journey—and it promises to be an exciting trip!

I look forward to connecting with our wonderful alumni far and wide. I can't wait to meet you in person.

Thank you again for the warm welcome that Stacy and I have received. Now, let's get to work—and Go Panthers!

Sincerely,

John Nicklow, Ph.D. President



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'In the Exploration Business'

Astronaut Sunita Williams '95 M.S. on the Future of Space and Why We Must Explore

"Space exploration, I think, is just a calling to the human soul," NASA astronaut SUNITA WILLIAMS '95 M.S. says.

It is a calling that the retired Navy captain and distinguished Florida Tech alumna heard—and heeded. We are a better spacefaring society for it.

Her first mission on the space shuttle, STS-116, launched Dec. 9, 2006, to the then-unfinished International Space Station. During more than six months aboard the ISS, Williams took four spacewalks totaling more than 29 hours to help with station construction. (It took 135 spacewalks over many missions to complete ISS assembly.)

"I got to be part of the construction crew that actually built the space station," Williams said in an interview with Florida Tech in early May. (Scan the OR code below to watch!) She was in town to speak at the university's spring commencement ceremonies.

When Williams arrived at the ISS for her second mission in 2012, the station was complete. Still, among the research and experiments she carried out over her four-month stay, Williams also conducted three spacewalks to replace a component that relays power from the space station's solar arrays to its systems and repair an ammonia leak on a station radiator.

In many ways, exploration is accretion-a ship gets so far and returns, providing the next team with what it learned. Building the ISS, keeping it functioningall of that counts as progress and a starting point for whatever-and whoever-may come next.



Sunita Williams speaks at spring commencement.

"We always wonder. The big questions, the Carl Sagan questions, 'Why are we here?" Williams said. "So space exploration, I think, is universal. Doesn't matter who you are, where you come from, what your ethnicity is, your religious background. It's like, 'What is it all about?'"

As she has done before, Williams will help lead the way toward what's next, as she and Barry Wilmore will pilot Boeing's Starliner spacecraft on its first crewed mission, a demonstration flight to the ISS to prove the end-to-end capabilities of the Starliner system.

An astronaut since 1998, Williams has seen—and participated in—the evolution of the space industry.

"We were stuck on what we were doing with the space shuttle when I first got to NASA. But because of the International Space Station, because of commercial crew, because of the public interest in understanding that we can do bigger things, I think the door is wide open," she said. "Of course, at NASA, we're in the exploration business."

WATCH THE VIDEO

Listen as Williams discusses her time at Florida Tech, her

career as an astronaut, the future of the space industry and more during a precommencement interview with Florida Tech.

WILLIAMS OFFERS ADVICE **TO CLASS OF 2023**

Before she pilots Boeing's Starliner spacecraft in the coming months, astronaut and Florida Tech alumna Sunita Williams shared some advice and insights with the Class of 2023 as the university's spring commencement speaker.

Williams commended the students for succeeding amid the challenges of the last several years, praising their resilience and perseverance.

"This is a great time in your life. The opportunities are endless, and you are only limited by how hard you are willing to work for your dreams," she said.

She offered three tips for the graduates to consider as they pursue their post-collegiate dreams:

- » Get to the starting line.
- » Don't forget what you learned in kindergarten (nap, share, be kind).
- » Be sure to stop and take a look at the foliage.

"Your launch countdown has begun," she concluded. "This is your world to make better?

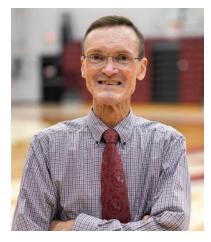


Summer Field Excursions

This long-tailed sylph is one of 197 bird species, including 22 hummingbirds, observed by Florida Tech students and their instructors during a 12-day field excursion to Ecuador in July. The group traveled from the high Andes Mountains to the Amazonian lowlands as part of Neotropical Archeoecology, a summer field course led by professors Mark Bush and Richard Aronson. Aronson guided students on another learning journey to a different cradle of diversity, the Galápagos, earlier in the summer. See more starting on page 28.

Photo credit: Rich Aronson

THE **pursuit**



FAMILIAR FACES: **Bob Rowe**

A SERIES CATCHING UP WITH THE CAMPUS FIGURES WHO MADE YOUR TIME AT FLORIDA TECH MEMORABLE

It's a peopleperson job, and I love dealing with people. Love it, love it, love it. That's probably my true passion."

-Bob Rowe

Senior admission counselor **BOB ROWE** '87 M.S. bleeds crimson and gray. Part of the Florida Tech community for 36 years, and only briefly questioning retirement, his positive impact and presence are undeniable. We spoke with Bob about his evolving role at Florida Tech, his volunteer interests and more.

You've worked at Florida Tech for 36 years what's the secret to that kind of longevity?

I think it's just the work environment here. The students, faculty, staff and administration here are nice people. You don't find that in most industries.

What is your role, and how has it evolved over the years?

When I first arrived on campus, I was an admissions counselor. Then, I got promoted to admissions coordinator. After that, I became assistant director of admissions and then an associate director of admissions. I was the senior associate director for 15 years. I was also the interim director for about two years. Now, as a senior admission counselor, I'm pretty much more of a mentor and a presenter.

You worked at Florida Tech and then went to work at the Melbourne Sand Company. What brought you back?

I liked what I was doing here at the university, but I tried to see about making a lot more money. So, in 1988, I went to work for the Melbourne Sand Company. There was money to be had, but it was very stressful. When I came back to the university in 1996, I realized how much I had missed being here. I really enjoyed traveling around the country telling people what a wonderful university Florida Tech is. Visiting high schools, attending college fairs and interviewing students were the things I really loved doing. Going to all sorts of fun places and telling the story of Florida Tech was pure joy.

What do you love about your job?

It's a people-person job, and I love dealing with people. Love it, love it, love it. That's probably my true passion, and this job has pretty much always been that. I think it helps me stay young mentally and physically. I never dread going to work. I always look forward to coming in each day.

You are an active member of the community through your involvement with Daily Bread. Can you talk a bit about that?

Currently, I'm on the board of directors with Daily Bread, which helps the homeless in Melbourne by providing food, clothing, daily showers, P.O. boxes, etc. Daily Bread helps people overcome homelessness and live more productive and happy lives. It's something that's near and dear to my heart: helping people whom very few want to help. The Melbourne/Palm Bay area has been home to me for over 43 years now, and I love helping the homeless and making Melbourne a better place to live for everyone.

What do you see in the future for yourself?

I plan on continuing my work in admissions. In my future, I just see more of the same—doing admissions presentations and convincing people they need to come to Florida Tech and nowhere else.



Summer STEM Institute for Teachers

More than a dozen area high school STEM educators participated in Florida Tech's Summer STEM Institute for Teachers. Centered on marine and environmental science, the two-week professional development workshop June 4–17 used field experiences in living laboratories, such as the Indian River Lagoon (pictured), to expand the teachers' skills and knowledge in instructional design, teaching methods and learning theory. Scan the QR code to learn more.

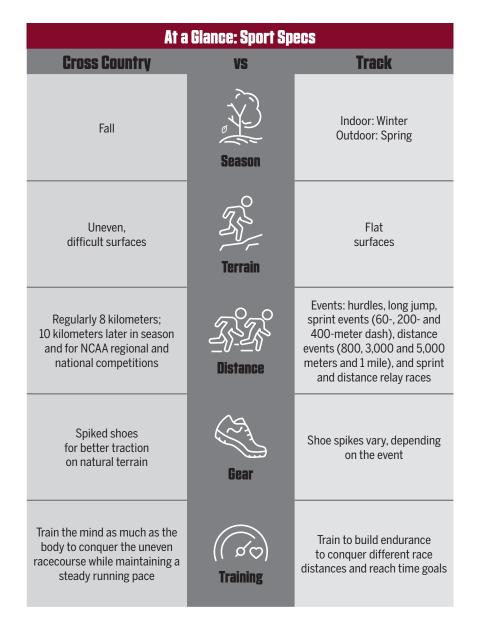


Cross Country Returns; Running Programs Expand

Florida Tech has reintroduced the men's cross country and outdoor track programs this fall following a one-year hiatus, along with the debut of the indoor track team.

The Panthers will be overseen by first-year head coach Marc Small, who comes to Florida Tech following stints with the track and field programs at Florida A&M University, Lake Superior State University and Tiffin University. He will be assisted by longtime Panther athletics stalwart Pete Mazzone, who served as head coach for the Panther cross country teams between 1992 and 2022.

Over the course of its history, the cross country programs have produced a combined nine Sunshine State Conference (SSC) team championships, five individual SSC champions, 70 allconference selections, six NCAA individual qualifiers and an NCAA Championship appearance for the men's team in 2012.





ONE TO WATCH

Waszkowski Named 2023 Farmer Scholar

Dazzled as a youngster by the towering rockets at Kennedy Space Center Visitor Complex and now seeking to play a role in future space exploration, Estero, Florida, resident Peter Waszkowski is Florida Tech's 2023 Farmer Scholar.

With a 5.58 weighted GPA good for the top 3% of his class at Estero High School in southwest Florida, hundreds of hours of community service and a penchant for working with other students to help them succeed, Waszkowski is an ideal fit for the Farmer Scholars program.

Waszkowski will major in aerospace engineering and plans to someday work on "major extraterrestrial projects," including exploring Mars or the planets beyond it.

"These trips really showed me how incredibly impressive space exploration is to have a truly massive piece of machinery withstand launch and re-entry," he said in an email interview. "That is when I knew that I wanted to be a part of this field in the future."

Named for Phillip W. Farmer, the former chairman, president and CEO of L3Harris Technologies Inc. and past chairman of the Florida Tech board of trustees, the 14-year-old Farmer Scholars program is the university's most prestigious financial award. It provides a full, four-year scholarship to a Florida resident and high school graduate who is among the top 5% of his or her class and demonstrates exceptional academic achievement and outstanding personal character.

Florida Tech Receives State Funding for STEM Education, Workforce Initiatives

Recognizing the importance of an innovative Florida workforce educated in STEM disciplines, Florida Tech is honored to receive \$7 million in funding in the 2023–2024 state budget for two critical initiatives that will harness the power of technology to supercharge the Sunshine State's economic future.

"Florida Tech is truly appreciative of the support from our sponsoring members of the Brevard state legislative delegation and the Florida House and Senate leadership, and for the confidence of Gov. Ron DeSantis," said then Florida Tech interim president Robert King. "These funds will greatly improve the ability of our university to provide enhanced STEM education and career awareness, carry out applied research and support the global competitiveness of partner companies and government agencies in Florida."

In collaboration with its L3Harris Institute for Assured Information, Florida Tech is launching the AeroSpace Cybersecurity ENgineering Development (ASCEND) program with \$5 million included in the legislative budget. ASCEND will accelerate the education and development of engineering students skilled in cyberinformed engineering for industry and government. The novel program will also help ensure technological relevance, talent growth and private-sector investment in Florida's rapidly growing aerospace sector.

ASCEND will utilize resources at the university's Center for Advanced Manufacturing and Innovative Design (CAMID). Under the program, the facility will further integrate digital engineering design and advanced manufacturing and testing and will include autonomous and simulation equipment instrumented with digital and cyberphysical capabilities for resilience and cybersecurity testing and evaluation.

"Cybersecurity and resilient engineering will be increasingly important functions in aerospace and defense companies in Florida and across the country," said state Sen. Debbie Mayfield. "I fully support Florida Tech's approach to enhance their renowned engineering education with these skill sets as a promising investment in Florida's future."

CAMID will also play a critical role in the Florida Tech project that received \$2 million in the 2023–2024 budget as part of the Biomedical, Aerospace, Manufacturing (BAM) specialized equipment platform.

"Advanced, relevant education, especially in high-demand STEM fields, helps build not just regional economies but also the people that power them," said Rep. Randy Fine. "Florida Tech continues to help students find and hone their talents in STEM fields, and I am pleased to champion these projects for the university."

Designed to increase Florida Tech's capabilities for boosting STEM workforce availability, hands-on project work and career awareness in targeted industries in Florida, new specialized space exploration and spacecraft engineering that are part of the BAM platform will provide powerful opportunities for exposing students and faculty to the equipment Florida's targeted industries are using—and will be using—to develop new technologies and new jobs.

"We live in a competitive world, and those who succeed are prepared for changing times," said state Sen. Tom Wright. "The aerospace industry is growing in Florida, and I believe Florida Tech is key to ensuring we power that growth by maximizing the training and use of aerospace technologies and manufacturing processes, both here on Earth and above it."

FLORIDA TECH SECURES

\$77M in funding in the 23-24 state budget

AeroSpace Cybersecurity ENgineering Development (ASCEND) program

to launch the

as part of the Biomedical, Aerospace, Manufacturing (BAM) specialized equipment platform

These funds will greatly improve the ability of our university to provide enhanced STEM education and career awareness, carry out applied research and support the global competitiveness of partner companies and government agencies in Florida."

-Robert King, then interim president



Nearly two dozen new shade trees were planted across campus. With support from a local landscape architect, each tree type was chosen for its fast growth rate, appearance, large shade canopy and Florida-native status.

Home Improvement: Latest Campus Updates

Nestled in the heart of Melbourne, Florida Tech's campus offers what many students, faculty and staff want: year-round pleasant temperatures and limitless sunshine. What some call "paradise," we call "home."

Still, Florida Tech is always looking for ways to improve. Over the summer, the university replaced all exterior post-andpanel signs to align with the university brand, as well as to standardize the size and format. After the success and positive response to the university's initial solar gazebo installation in 2021, Facilities Operations recently installed additional solar gazebos, giving students more places to work and relax outside.

To enhance environmental branding, starting with the first place visitors arrive, the university updated the L3Harris Commons lobby with a set of poster installations that convey the "relentless pursuit of greatness" message, along with a selfie wall, where visitors can pose for photos. Rounding out the campus improvements, Robert King donated funding for nearly two dozen shade trees on campus before concluding his tenure as interim president in June. The three types of trees installed were red maples, royal poincianas and black olive trees. One row of trees lines each side of the Olin Quad, and the other trees are headed for spots around Crawford Green. A stone marker and plaque between Gleason Performing Arts Center and Skurla Hall identify the area of new trees as "Bob's Grove."



DID YOU KNOW?

Tree shading and evapotranspiration, a process by which a plant actively moves and releases water vapor, can reduce surrounding air temperatures by as much as 6°F.

With cool air settling near the ground, air temperatures directly under trees reach as much as 25°F cooler than air temperatures above nearby asphalt.



FLORIDA TECH



A catastrophic car accident may have changed the course of Isabella Leon's athletic career, but it didn't stop her from being a leader on the Florida Tech women's soccer team.

By Jerry Durney

If you ask any soccer player what his or her ideal final competitive game would look like, you'll get a variety of answers: the match-winning goal, the perfect pass, the center back shutting down every attack, a player-of-thematch performance while controlling the game from midfield. No matter the outcome, they all want the same thing: to leave the game saying,

"I gave everything I could."

Panther women's soccer defender Isabella Leon may never get to play out the first part of that scenario, but that hasn't stopped her from giving everything she can.

Everything changed for Leon Feb. 7, 2021. After the fall season had been canceled due to the COVID-19 pandemic, a shortened spring season was just a month away. Leon was riding through Orlando with a friend whom she was visiting when another car drove through a red light and hit the side of the car.

Due to anterograde amnesia, a temporary condition that often stems from the physical trauma of a car accident, Leon does not remember much about the crash, which she considers a blessing. In the week following, her parents had to frequently explain to her the events that had brought her to the ICU, followed by another week in an inpatient therapy center.

In addition to a major concussion, Leon also suffered a cracked vertebra, a shattered disc in her back and nerve damage that caused lost motor function in her right leg for nearly a month. She says the experience was like learning to walk again because the muscle memory simply wasn't there for a time.

As her condition improved in the following weeks, Leon and her family naturally began to wonder when or if she could play soccer again. Unfortunately, they received the answer they had feared: no soccer.

Leon felt like she had been sent back to square one. She had recently recovered from an ACL injury, but this time, not only would she have to undergo the grueling physical process of building her body back up to where it was before the accident, but she would be doing it without the reward of knowing that she could get back on the pitch at the end of the process. She credits her therapy team at Orlando Regional Medical Center for helping her stay resolute throughout her rehabilitation.

"Most of the same people who knew me from the prior recovery, I was very comfortable with, very open and honest about how I was feeling," she says. "In addition to the physical toll, it took such a mental toll on me because I was removed completely from school, from my day-to-day, and I was not able to do anything for myself—it was very, very tough."

While Leon was completing her demanding physical recovery, she also began to wonder what would be next for her without the potential of taking the field for Florida Tech again to look forward to. It was during this time that her teammates helped forge her new path.

"I was actually very lucky to have this group of women around me. They're all so wonderful and amazing and were very patient with me, with my recovery process, as well as supportive," Leon says. "They were constantly texting me, calling me, visiting me, just making sure I still felt very involved in soccer and involved in my social life, as well, because that was a very good outlet."

Despite the accident, for the past two seasons, you could still regularly find Leon at Rick Stottler Field, practicing with the team and going through different types of agility and passing drills—not only helping her heal physically but also setting an incredible example for the squad.

"She's so loud, so supportive on the bench during games. I mean, when we come off the field at the end of the game, and we all walk across to salute our fans, you'd think she played; she puts that much energy on the sideline," says head coach Ryan Moon. "She is a fantastic teammate, and when she is able to warm up with us, she's always pushing, and the quality she brings and her technical side is very good."

Moon highly regards Leon's contributions to the team, which was a national quarterfinalist in 2021 and has reached the Sunshine State Conference final in each of the past two seasons.

"She sets high standards for herself, and I think just by doing that, she sets an example for the team," he says. "She's working nights at her job and then coming out to a 7:30 a.m. practice, sometimes straight from the hospital. A lot of the players see that, and the energy and commitment speaks for itself."

You read that right. In addition to the demands of being a student at Florida Tech and her commitment to the team, Leon also works as a certified nursing assistant (CNA) at Holmes Regional Medical Center in Melbourne. Regularly working in the surgical ICU, Leon draws from her own experience in assisting patients.

"No one's happy in the ICU, at all," she says. "I think it's very important to validate what the patient is feeling and tell them, 'I totally understand what you're going through because that was me, as well, and this is really hard right now. I know you're in a lot of pain and there are a lot of emotions you're going through right now, but it's up from here."

On April 26, Leon was awarded the Martha Work Sportsmanship Award at Florida Tech's annual Scholars Champions Leaders Award Ceremony. The award is presented to a scholar-athlete who exhibits respect, courtesy and restraint in his or her actions and remains positive in pursuit of excellence.

It didn't seem real to her at first, Leon says, but true to who she is, Leon made sure to note that there were others just like her who could share in the recognition.

"I'm very grateful that people can recognize the work that I put in, and not only me, but also other athletes who are injured or on the sidelines," she says. "It was super heartwarming."

Leon's drive and attitude are as valuable as any skill or physical attribute, Moon says.

"I think, sometimes, when you look at programs, no matter what the sport, the tendency is to look at what happens on the field—the achievements and stats, and those things," he says. "But I think, sometimes, the real linchpins of the team can be outside of that, and I put Bella into that category. She's so important to our program. Whether it's for the players she's come through with or new players getting involved, she sets an example that's second to none, and I think that's something that every coach wants to have in their team."

LEON AT A GLANCE

DEGREE

PROGRAM: B.S., Biomedical science

ON THE TEAM: Since 2019

RECENT HONOR:

2023 recipient of the Martha Work Sportsmanship Award, earned by a scholar-athlete who exhibits respect, courtesy and restraint in his or her actions and remains positive in pursuit of excellence.

LUIS DANIEL OTERO On Driving Digital Transformation Through Model-Based Systems Engineering

"

"Digital transformation" is shaping the future of industries globally.

Involving the integration of digital technologies into all aspects of an organization, digital transformation fundamentally changes how an organization operates and delivers value to its stakeholders.

Digital transformation principles applied specifically to the field of engineering lead to "digital engineering," which uses advanced digital technologies and methods to enhance all phases of a system's engineering lifecycle.

Consider a state-of-the-art military aircraft. The development of such an advanced system—equipped with stealth capabilities, cutting-edge avionics and advanced weapon systems—relies heavily on digital tools. From the initial design stages, carried out in highly detailed virtual environments, to the final integration of systems, where each component's behavior is analyzed through complex simulations, digital engineering is everywhere. It streamlines processes, improves accuracy and enhances the final product's performance.

Likewise, digital engineering is revolutionizing important areas such as the health care industry. From sophisticated imaging devices and robotic surgical systems to telemedicine platforms that connect doctors and patients across vast distances, each of these systems depends on the integration of numerous complex components, and each must operate seamlessly to ensure optimal performance.

A key approach that relates systems engineering to digital transformation and digital engineering is model-based systems engineering (MBSE).

Whereas traditional systems engineering relies on documentbased approaches to support systems engineering activities (e.g., text-based requirements and design documents), MBSE does so by relying on digital system models instead.

Digital transformation principles applied specifically to the field of engineering lead to 'digital engineering,' which uses advanced digital technologies and methods to enhance all phases of a system's engineering lifecycle.



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Luis Daniel Otero Associate Professor and Program Chair of Systems Engineering In essence, MBSE supports traditional systems engineering. It doesn't replace it; rather, it offers an approach that aims to make systems engineering more efficient.

Most of my previous research efforts involving systems engineering—such as conducting feasibility studies with unmanned aerial systems equipped with different sensor technologies, developing simulation models for process optimization, and supporting the creation of frameworks for autonomous sensing and edge analytics—mostly involved a documentbased systems engineering approach.

However, my current research aligns with MBSE and focuses on two main areas.

First: How can we harness artificial intelligence (AI), automation and MBSE to optimize the development and maintenance of next-generation systems?

This question leads to a series of subproblems, each of which could be developed into individual research questions. For example, how can AI-driven algorithms be utilized in MBSE to assist in the generation and optimization of system architectures and design solutions? How can we effectively interface with MBSE tools to automate the development of systems modeling language (SysML) diagrams for such architectures?

Second: How can systems engineering programs align their curricula more closely with industry trends and demands to ensure graduates are ready for the evolving job market?

This question aims to address the growing demand for highly skilled and industry-ready systems engineers. The goal is to identify gaps between the current state of systems engineering education and the evolving needs in industry environments, particularly related to digital engineering. The findings could significantly influence systems engineering education policy and practices, ultimately contributing to a more effective and efficient engineering workforce.

LUIS DANIEL OTERO

'98, '02 M.S., Ph.D., is an associate professor and program chair of systems engineering in the department of mathematics and systems engineering. His research interests include model-based systems engineering, simulation modeling and performance analysis, and process improvement related to various types of systems (e.g., missioncritical systems and transportation systems). 3

10

Soil or Water: What's the Best Option for Space Agriculture? Palmer Wins Planetary Society Grant to Examine Answers

No matter where humans travel, sustenance remains a necessity.

Finding a bite to eat during a visit to New York, for example, is no problem. When the destination is a bit farther away, such as Mars, the options are not as plentiful there or on the long journey to get there.

That's where Florida Tech associate professor Andrew Palmer comes in. He and other scientists are exploring ways to feed our explorers, and a new competitive grant from the Planetary Society will fund work that examines the two most likely ways to produce food during travel to these far-flung spots: in soil (or something like soil) or water.

Palmer and his team were awarded a \$50,000 Science and Technology Empowered by the Public (STEP) grant, the Planetary Society recently announced. Their project: "Evaluation of food production systems for lunar and Martian agriculture."

For the next year, they will grow radish microgreens, lettuce and tomatoes in identical environmental conditions with one major exception: one batch will be grown hydroponically and another will be grown in regolith—like lunar or Martian soil. The experiment aims to characterize and compare the two methods, both of which have merits and shortcomings.

"It may be that a combination of these approaches, tailored to the diverse needs of different crops, is the best way to provide sustainable and productive agriculture," Palmer said. "Until now, there have been no direct comparison studies between hydroponic and regolith-based systems for any crop targeted for space applications. We are excited to address this knowledge gap."

The team, which includes experts in plant physiology and biochemistry, as well as space agriculture and systems efficiency analysis, will test their hypothesis that faster-growing crops, like microgreens, will be better suited for hydroponic systems even in the long term, while slower-growing crops, like tomatoes, may favor a regolith-based production system.

Palmer and his co-investigator, Rafael Loureiro from Winston-Salem State University, are joined by collaborators assistant professor **J. TRAVIS HUNSUCKER** '11 M.S., '16 Ph.D., and Ph.D. student Thiara Bento from Florida Tech, Laura E. Fackrell from NASA Jet Propulsion Laboratory and Jéssica Carneiro Oliveira from Universidade Federal do Estado do Rio de Janeiro, Brazil. It may be that a combination of these approaches ... is the best way to provide sustainable and productive agriculture."

-Andrew Palmer			
Regolith	VS	Hydroponics	
Microorganisms associated with the plant play a major role in making nutrients available. Microorganisms along with the plant can liberate nutrients from the atmosphere or regolith on-site, limiting the amount of material we need to take with us.	Nutrient Source	Nutrient solutions are used to make nutrients readily available to plants. These require production at facilities Limited microbiome (a consortium of microorganisms that can provide support)	
Less automation (fewer parts)	Equipment	Requires pumps to distribute and collect water (more parts) Associated with reduced water and nutrient loss relative to regolith-based agriculture	
More disease-resistant	Disease Resistance	Systems are often highly connected, allowing disease to spread faster.	
Better suited for plants that might require longer growth or whose edible portions are "underground" (e.g., potatoes)	Prime Produce	Well suited for plants like strawberries, lettuce, cucumber, etc.	
Typically requires more space	Space	Vertical stacking can save space but requires more lights (more electricity, more things to ship off-world, etc.)	

MACHINE LEARNING MAY PLAY A ROLE IN BUILDING ENERGY MODELS

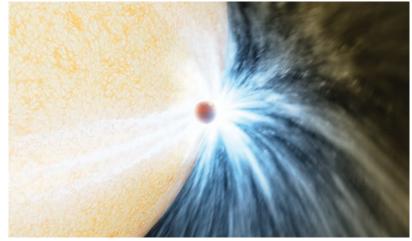
More than 40% of all U.S. energy use and greenhouse gas emissions are associated with the building sector. A study from Florida Tech researchers is exploring whether machine learning can help reduce this environmental impact.

The research was featured in a paper posted in the January edition of *Energies*, "A Novel Approach for Optimizing Building Energy Models Using Machine Learning Algorithms." Authored by Hamidreza Najafi, associate professor of mechanical engineering, and **BENJAMIN KUBWIMANA** '21, '21 M.S., a mechanical engineering alumnus, the study uses a new approach for building energy modeling (BEM) and optimization of building energy models.

The current practice for building energy simulation software tools requires a lot of manual entry of large lists of detailed inputs—design and operational variables, including characteristics of the building such as wall, building envelope and window materials, or operational parameters, such as setpoint temperatures for different thermal zones.

Najafi and Kubwimana's work involves developing a Python-language software script that allows automated entry of the data into a physics-based building energy simulation tool called EnergyPlus. Using a series of variables as inputs through this Python script, a large variation of multiple parameters is covered, resulting in the creation of large data sets that can be used to develop a surrogate energy simulation model. A data-driven model using machine learning algorithms, specifically, artificial neural networks, is then trained using these datasets. Two optimization approaches-genetic algorithm and Bayesian optimization-are applied to the surrogate model to achieve the optimal design for the building. The approach can be easily adjusted to account for different design or operational parameters.

"This process can be automated, so the data from the sensors in the building can be supplied into computer models to facilitate continuous adaptation of the digital twin into the current operating condition of the building," Najafi said. "This could help the building owner predict how much energy they're going to consume based on changes that may occur in the operational parameters. This allows for proper planning of budgeting for the energy cost and prediction of energy consumption and energy production, as well as reduction in CO2 generation associated with energy savings."



This artist's impression shows a doomed planet skimming the surface of its star. Image credit: K. Miller/R. Hurt (Caltech/IPAC)

New Study Reports First Observations of a Star Swallowing a Planet

A study involving assistant professor Luis Quiroga-Nuñez presents for the first time confirmed observations that a dying, expanding star has consumed a nearby planet.

The study, "An infrared transient from a star engulfing a planet," was published as the cover story in Nature. Massachusetts Institute of Technology (MIT) researcher Kishalay De is the lead author, with contributions from Quiroga-Nuñez and researchers at MIT, Harvard University, California Institute of Technology (Caltech), Johns Hopkins University, the University of California, Berkley, the National Science Foundation's National **Optical-Infrared Astronomy Research** Laboratory and the National Radio Astronomy Observatory.

The article reports an observation of a star merging with a gas-based exoplanet in May 2020. Though this sort of event may happen up to a few times every year within the Milky Way, this is the first time it has been observed. The incident took place in a star approximately 12,000 light-years away, near the constellation Aquila.

When observing the skies for any brightness changes at the Zwicky Transient Facility at Caltech's Palomar Observatory in California, astronomers spotted an outburst from a star that became more than 100 times brighter over 10 days before fading away. The white-hot flash was followed by a colder, longer-lasting signal, which led De to contact the team of researchers to study what happened.

When the team further analyzed the data and paired it with measurements taken by NASA's Wide-field Infrared Survey Explorer (WISE) space telescope, they confirmed what astronomers thought would happen at the end of a stellar cycle: The star expands as it dies, engulfing other planetary bodies around it and brightening on the outside in the process. This discovery also gives a preview of what will happen to our solar system and closest planets as the sun dies. Astronomers expect that planets such as Mercury, Venus and Earth will be engulfed by the sun in 4 billion to 5 billion years.

Specializing in radio astronomy, a subfield of astronomy that studies celestial objects at radio frequencies, Quiroga-Nuñez's role in the research was to study the radio data that came from the area as the star engulfed the planet. During his research, he was intrigued by the idea of not knowing what exactly happened, the process of trying to figure it out via the explosion period, and what it means for the potential of planetary studies. **Prime is a quantity.** Unique, a product unachievable by any two other numbers. *2, 5, 11* ...

Prime is a quality. Excellent, of the highest caliber. *Outstanding, Choice, Top-Notch*...

In both quantity and quality, this column features Prime Examples of what makes us Florida Tech.

PRIME EXAMPLES of **LEADERSHIP**

At its simplest, to lead is to direct—Go. Do. Be.

True leadership, however, is demonstrated. Leaders may or may not have charge, but they certainly have influence—over others, themselves, society. With authenticity and ambition, curiosity and open minds, leadership becomes inspiration. At Florida Tech, we lead projects. We lead people. Together, we lead change.

Here are a few prime examples.



John Nicklow, Ph.D.

Read about Florida Tech's new president in "A Perfect Fit" on page 18.

2 Richard Aronson, Ph.D.

 Aronson, marine biologist, professor, ocean engineering and marine sciences department head and Galápagos field research expedition leader, shares his incredible insights and photography in "Far Away, Where the Learning is Everywhere" on page 28.

Sunita Williams '95 M.S.

Read "'In the Exploration Business'" on page 4 for astronaut alumna Williams' take on the future of space and why we must explore.

4 Isabella Leon

 Leon is a biomedical science senior, women's soccer team member and 2023 Martha Work Sportsmanship Award recipient. Read how she has overcome adversity in "Sideline Star" on page 10.

5 Jazmin Truesdale '11 MBA

Learn about Truesdale, AZA Entertainment founder, and her diverse female comic book universe on page 34.

2 ALUMNI **TAKING THE LEAD**

IULIO TOMAS CORONADO'23

In spring, Coronado achieved American Association of Airport Executives (AAAE) Certified Member status, making him the only person in Panama to have the designation, which "signifies that you have a diverse knowledge of the primary functions of how an airport operates and can provide the opportunity to progress up the ranks in a close-knit community," according to the AAAE. Coronado, who recently started working as a quality assurance auditor at DHL Aero Expreso S.A. at the Tocumen International Airport cargo terminal in Panama City, was inspired to achieve the certification by William Rankin, Ph.D., his former Florida Tech College of Aeronautics professor.

GERARDO VALERIO '05

Valerio, a Florida Tech men's soccer midfielder from 2002 to 2005, recently coached the Honduras Men's U20 National Team in the U20 World Cup in Argentina, compet-

ing against Gambia, Korea Republic and France in the group stage. Valerio, who began his coaching career with Palm Bay and Melbourne Beach youth programs while playing at Florida Tech, founded and became head coach of the Third-Division team Real Tegus in Honduras in 2016.

My time at Florida Tech played a valuable role in my success as a coach and, more importantly, my ability to be an influential leader within my community. I not only teach the sport but introduce values like perseverance, sacrifice, respect, effort, creativity and many others to all my players. I credit this to my time at Tech."

-Gerardo Valerio '05





Florida Tech is being featured in a second episode of the hit Amazon Prime TV series, "The College Tour." Meet your guides, who join host **1** Alex Boylan to share the Florida Tech story:



Carter Batt aerospace engineering sophomore



Marcello Mattei '22 biomedical engineering; biomedical engineering M.S. student



Emma Conti aerospace engineering and computer science senior



Jared McColpin business administration dual B.S. and MBA junior



Lauren-Ann Graham '20 aerospace engineering; mechanical engineering M.S. student

Darin Hiraldo

senior

ocean engineering

Josianne Keenan

journalism senior

multiplatform



Zach Miller aviation management senior



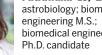
Ceana Palacio ocean engineering



Nashaita "Nash" Patrawalla '19, '21 M.S. astrobiology; biomedical engineering M.S.; biomedical engineering



senior









Introducing John and Stacy Nicklow: Partners, Problem-Solvers and Important Pieces of the Florida Tech Puzzle.

By Karly Horn



John Nicklow, Ph.D., is Florida Tech's sixth president.

But did you know that he also once wrestled a steer?

Yes, John has more than 25 years of higher education experience as a faculty member and administrator, most recently serving as president at the University of New Orleans (UNO).

But many years before that, he worked as a pizza delivery driver, a lumber yard laborer, a bartender and a bouncer.

He is a former NCAA Division I football player (right offensive tackle) who earned his bachelor's and master's degrees in civil engineering at Bucknell University, later earning his Ph.D. in civil engineering from Arizona State University.

But he's also a romantic (just ask his wife, Stacy Nicklow, Ph.D.) who loves spy novels and considers Jack Ryan a personal hero.

These many facets both past and present, conventional and unexpected, are the puzzle pieces that intricately connect to form John Nicklow, our new president.

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"I have a need to create, I have a need to progress, I have a need to problem solve."

For a "puzzler" and problem-solver like President John Nicklow, every piece flipped is an opportunity. Every match made is progress. And when the puzzle is complete, it's a success. Problem solved, next puzzle, please.



Lessons Learned

In his 25 years in higher education, President Nicklow has taught a lot of lessons. But more important, he says, are the lessons he has learned.

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It's a fitting metaphor for John, an avid "puzzler."

"I always have a puzzle going. It's almost like meditation for me," John says. "You really can't think about other things when you're doing a puzzle."

To some, assembling a puzzle from 1,000 tiny pieces dumped from a box and splayed across the table facing every direction might sound overwhelming.

But to John, ever the problem-solver, every piece flipped is an opportunity. Every match made is progress. And when the puzzle is complete, it's a success. Problem solved, next puzzle, please.

"I have a need to create, I have a need to progress, I have a need to problem solve," John says. "Maybe it's the engineer in me that always needs a project—to make things, whatever they are, somehow better."

John's positive, level-headed persistence translates from puzzles and problems to people, his profession and pretty much everything else, which so far, has served him well.

It led him to Bucknell, a university that placed academics over athletics, encouraging him to pursue the engineering degree he desired while also playing football, an almost unheard-of combination that several other schools told him just wasn't possible.

After two years, he entered a five-year program that enabled him to simultaneously earn his bachelor's and master's degrees. During that time, he completed two summer internships, one of which was on Navajo tribal lands in the New Mexico desert, where he learned as much designing water distribution systems for communities with none as he did interacting with the different people and cultures that surrounded him.

"Working with Native American communities really taught me the value of communication and understanding a culture without making assumptions," he says.

It's a lesson that was really driven home, he says, when he was chased off the property with a shotgun. Twice.

"I knew I was there to help, but the older woman—who barely spoke English and just saw me knocking on her door in my public health officer's uniform—didn't," he says. "To me, that meant, OK, I need to start building relationships, communicating in different ways and having some empathy around their situation."

The five-year program also afforded John the opportunity to work as an undergraduate research assistant, exploring water flow through a new type of culvert. Although it took a few years working as an engineer after graduation to realize it, the stimulation and fulfillment of the research assistant experience is what inspired him to transition from industry to academia.

"It's going to sound odd, but I got bored, and I wanted more," he says. "I really missed teaching, and I really missed research. So, I went back and got my Ph.D. and then, ultimately, my first tenure-track job in education."

John went on to hold increasingly senior titles, including chief enrollment officer and, later, provost and vice chancellor for academic affairs at Southern Illinois University, followed by provost and, eventually, president at UNO.

He has become widely recognized at the university level, nationally by the American Society of Civil Engineers (ASCE) and by industry for his teaching and research accomplishments.

When it comes to his career, John can speak passionately about his research, focused on STEM education advancement and environmental and water resources systems optimization.

He can tell you about the four books he has authored, and he is happy to discuss his experiences becoming and serving as a registered professional engineer, a certified professional hydrologist, an ASCE fellow and an American Academy of Water Resources diplomate.

But if you really want to learn about his professional passion, ask him about Dave.

A first-generation college student John met through the rolling mentorship program he'd established, Dave was so grateful for John's guidance and coaching to and through medical school that he once drove four hours with his dad, his chainsaw, two generators and a backhoe to help John clean up the wreckage the May 2009 Southern Midwest Derecho had left behind just days before SIU's commencement ceremonies. Today, Dave is a successful, accomplished surgeon and still one of the most generous people John knows.

Ask him about Janie.

Janie needed a job to help put herself through college. So, the Nicklows hired her to babysit their son, Ethan, teach him to swim and watch their house and dog, Bayley, when they were out of town. She's now the owner and operator of AWR Engineering Inc., a prominent water resources engineering firm in Anchorage, Alaska.

Ask him about Christine, or Nigel, or Kennedy or Kyle ...

These, John says, are the highlights of his career.

"I have the best job in the world. Yes, there are a lot of responsibilities and challenges, but in education, we get to serve students

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Dr. Nicklow, Too

Born in Fayetteville, New York, a suburb of Syracuse, Stacy Nicklow grew up an avid reader, a self-proclaimed math geek and a dedicated volleyball player, passions that led her to Bucknell University, where she played NCAA Division I volleyball and completed a five-year, dual-degree program in mechanical engineering and English—not exactly a classic combination, she admits.

"I know mechanical engineering and English do not sound remarkably similar at all—I mean, in any way. But they really are," Stacy says. "There is a creative process in engineering that is not just formulas galore. We have certain principles that structure engineering, but we also have all these tools that we apply to find a solution and really make a project ours. English is similar: different tools, different projects, different problems, but really, developing our own unique take. And the similarity of those two things became really clear to me when I was being creative in both ways."

After graduating from Bucknell, where she and John met as sophomores and have been inseparable since, Stacy worked for several years as an energy conservation engineer, her favorite part of which, she eventually realized, was writing engineering reports. This motivated her to pursue her graduate studies in English at Southern Illinois University (SIU), where John began his higher education career.

She worked as a graduate teaching assistant while earning her master's and Ph.D. in American literature at SIU, an experience that sparked another passion: teaching. "There's something really special about seeing that transformative moment in a student's life, where they're reading something from someone they've never heard of before," Stacy says. "While yes, students are going to complain about how long the papers are and 'Why do I care how to spell something?' It's really about the exposure and the transformative power of education."

Stacy spent nearly 20 years in the classroom, beginning as a teaching assistant then as an adjunct professor and assistant director of the Writing Center at SIU, and ultimately as a tenured faculty member in English at Shawnee Community

College in Illinois.

"I think there's no more vibrant place to be than a college campus," she says. "The energy and excitement of students and faculty is just palpable from the sidewalk to the academic buildings to the sports fields. It's just truly inspiring to me to be a part of it."

While she no longer works as faculty, she continues to be a major presence on campus as first spouse, a unique, exciting and fulfilling role she fills with enthusiasm and pride.

"I tell people, 'I have the best part of John's job," she says. "I get to meet fascinating people. I have interesting conversations. I get to meet people I would never have met without being in this role—and I don't have to solve the hard problems. So, I'm lucky."







In President Nicklow's first weeks on campus, he presided over his first commencement ceremony and embarked on a listening tour to familiarize himself with Florida Tech, its campus and its community. His primary objective in the coming months, he says, will be to raise the university's visibility and impact.



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and make an impact in a really positive way," he says. "We get to make such a difference in people's lives, whether it's through innovative research or graduating students and putting them on the path toward meaningful careers."

This sentiment fuels his ambition and his open-door, student-centric approach to leadership.

"'Has anybody talked to the students?' It's the first question John asks—and trains his teams to ask—when broaching a new topic, project or opportunity.

"It doesn't really matter the issue—big or small. I think our students deserve our attention. I think they deserve our support," John says. "They are our primary constituency, and we need to think about our students first in everything we do."

It might be the first question John asks, but as he familiarizes himself with Florida Tech, its campus and its community and settles into his new role as president, it certainly will not be the last.

In fact, from the moment he learned he'd been nominated (twice) for the presidency, the big questions—or rather, the prospect of pursuing their answers—are what excited him most.

"I've known Florida Tech for many, many years. I've said it before, and I'll say it again—it's not broken," John says. "The question is, do we stay at this level? Do we continue to do what we've been doing? Or do we do it better? Can we imagine something even bigger that can make our impact even greater? Are enough people aware of that impact—of Florida Tech, who we are and what we're doing across the globe? Once we answer those questions and establish that vision, we'll put together a plan, utilizing each individual's strengths, to get there together."

One question John has always wondered himself: Why aren't more people flocking to Florida Tech?

His primary objective in the coming months, he says, will be to raise the university's visibility and impact so that they are. To John, that means piecing together the ideal college experience:

Supporting faculty as they engage in unique research experiences and explore innovative teaching methods.

Utilizing the ample data at our fingertips to make informed, strategic decisions.

Establishing fruitful partnerships with the local businesses and industries that fortify the Space Coast.

Investing in student success.

And, perhaps most important, ensuring that all members of the campus community feel included and engaged.

Because, John says, the university can strive to provide all the parts that might comprise each individual's perfect university experience. But whether you're a student, faculty, staff—or even president—like a puzzle, every piece has its place.

"Sometimes, even when you're not looking, an opportunity just creeps up behind you and says, 'This is the one of a lifetime,'" John says. "Florida Tech might not be for everybody, but for me, it's a perfect fit."

Best Together

If John Nicklow is a puzzle, then Stacy Nicklow is about half its comprising pieces the better half, John says.

"We often say, 'You're my best,' and just leave it at that," John says. "Stacy's my best friend, my best confidant; she's the best everything in my world, and she brings out my best. She's loving, compassionate, supportive. She makes me a better person."

Also a "Dr. Nicklow," Bucknell-educated engineer, former collegiate student-athlete, educator, Northeastern U.S. native, outdoor enthusiast, "puzzler" (crossword, not jigsaw) and Pittsburgh Steelers fan, Stacy admits that she and John are not the "opposites attract" kind of couple.

The subtle differences they do possess, however, complement each other to form a stronger-than-its-parts whole. John's background is in civil engineering—think strong, still, sturdy—whereas Stacy found her niche in mechanical engineering—read movement, progress. John is a "loveable geek" who brings out Stacy's social side, she says, while John credits Stacy for the marked improvement in his grades when they met in college—and not just because she graded his papers (a fact John learned when they met at a party and used to his advantage, courting Stacy with sweet notes in the corners of his papers).

They dated for four years before John proposed in a post-ballet ("The Nutcracker," Stacy's favorite) horse-drawn carriage ride through Rittenhouse Square in Philadelphia. They've been together ever since.

Together, they've raised their son, Ethan, an extremely bright, kind and talented soonto-be third "Dr. Nicklow" pursuing his Ph.D. in biomedical engineering at the University of Virginia, and "the greatest human being on the planet," the Nicklows agree.

Together, they've earned seven degrees between them.

Together, they've transitioned from students to professionals, industry to academia.

Together, they've navigated, nurtured and guided two prior universities to new heights.

Together, they walk, hike, kayak, cook (check out their recipes for Nicklow Chili and Dr. Stacy's Macaroni and Cheese on page 27) and, more important, John says, eat.

And together, they embark on their newest and, perhaps, most exciting endeavor: Florida Tech.

"I love what I do. But even more than that, I love what we do together," John says.

The Nicklows extend this intrinsic partnership to campus and beyond, embracing their roles as "Mom and Dad of campus," as well as dedicated community partners and influential university representatives.

"Everything we do is just 100% partnership," Stacy says. "Everything is just 'John and Stacy."

"

I love what I do. But even more than that, I love what we do together."

-John Nicklow

Panther Bites: Recipes for Gathering Season

By Mary-Lou Watkinson

As summer comes to a close, we welcome fall and all it has in store: holidays, tailgates and gatherings galore. 'Tis the season for kitchen catchups, big meals and sweet treats—hopefully, with the people we care about most. With help from the Panther community, we curated a list of recipes that are sure to have your taste buds tingling. So, let's get cooking!

MAIN DISHES

SAL'S SPAGHETTI HOUSE SICILIAN CHICKEN

Serves: 4

INGREDIENTS

4 bone-in or boneless chicken thighs (sub chicken breast if preferred)

Dry vermouth, enough to cover chicken

¹/₂ cup extra virgin olive oil, plus a few tablespoons for coating baking sheet

2 peeled russet potatoes cut lengthwise, then in quarters

4 peeled small onions cut in half

7 ounces of fresh or jarred mushrooms

1/2 cup of oil-cured dried black olives

1 (14-ounce) can quartered artichokes rinsed in cold water

4 whole garlic cloves, peeled

Flour, enough to coat chicken

- Salt and Pepper to taste
- Parsley (chopped fresh or dried) to taste

*Tip: Freeze portions that are not used. To reheat, defrost portioned container for at least 24 hours, then microwave on power level 4 for about 2 minutes and 30 seconds.

INSTRUCTIONS

- 1. In a bowl or plastic bag, cover chicken with dry vermouth and let marinate for about a half-hour.
- 2. Preheat the oven to 350°F.
- Coat a large baking sheet with olive oil, and spread vegetables across in 3. one layer.
- 4. Heat ½ cup of oil in an oven-safe frying pan, preferably cast iron.
- 5. Mix flour, salt and pepper, then dredge the chicken in the mixture.
- 6. Brown the chicken, then place it on top of the vegetables.
- Sprinkle everything with oil (can use the leftover oil from browning 7. chicken).
- 8. Sprinkle with chopped parsley.
- 9. Cover with aluminum foil, and bake for 45 minutes.
- 10. Remove foil, and bake for another 15 minutes.
- 11. Remove from the oven and let rest for 30 minutes. Any extra oil can be poured on top of each portion.



< ABOUT THE COOK

NAME: George Poidomani

FLORIDA TECH CONNECTION: '73 B.S., management science

RECIPE FUN FACT: Originating from Ragusa in Sicily, Italy, this recipe was handed down from father to son and was one of the most requested entrees at Sal's Spaghetti House, Poidomani's father's (Sal's) restaurant in Allentown, Pennsylvania!



POZOLE ROJO Serves: 12

INGREDIENTS

- 2 pounds boneless pork (loin or butt)
- 4 ounces olive oil, divided
- 12 ounces yellow onion
- 2 tablespoons garlic
- 1 quart chicken stock
- 1 quart beef stock
- 4 tablespoons mild New Mexico chile powder*
- 2 tablespoons hot New Mexico chile powder*
- 1 tablespoon oregano leaves
- 2 teaspoons black pepper
- 1 (25-ounce) can hominy
- Purchasing cumin 1 tablespoon ground cumin / seeds, toasting them in a dry pan and grinding them fresh will totally change the flavor of the spice.
- INSTRUCTIONS
- 1. Dice the boneless pork into 1-inch cubes.
- 2. Preheat a one-gallon pot over medium-high heat.
- 3. Add 2 tablespoons of olive oil and half of the cubed pork. Cook, stirring until browned.
- 4. Remove the cooked pork and repeat with the remaining pork until all is browned. Set aside.
- 5. Dice the yellow onion. Place the remaining olive oil and diced onions in the pot, and cook for 3-4 minutes, or until they begin to become translucent.
- 6. Chop the garlic, and add it into the pot with the onion, cooking it all together for 1 minute. Add the browned pork to the pot.
- 7. Add the stocks and spices, and bring the mixture to a simmer. Simmer for 75–90 minutes, or until the pork is tender but not falling apart.
- 8. Add the hominy, and simmer an additional 15 minutes.
- 9 Reduce the heat and serve.



Customize your bowl with diced/

sliced radish, shredded cabbage,

chopped cilantro and/or hot sauce.

lime wedges, minced onion,

ABOUT THE COOK

NAME: Jon Skoviera

FLORIDA TECH CONNECTION:

University Executive Chef

RECIPE FUN FACT:

This year, Florida Tech's Campus Dining team won the bronze Loyal E. Horton Dining Award in the Residential Dining - Special Event category for PDH's Global Kitchen special event on Mexico/Day of the Dead, featuring this dish! The award, which celebrates members' innovative ideas and program implementation, is named after a founder and past president of the National Association of College & University Food Services

and is one of the industry's leading awards.



FLORIDA KEY LIME PIE DIP

Serves: 8

INGREDIENTS

¹/₂ cup marshmallow creme (such as Marshmallow Fluff)

1/3 cup sweetened condensed milk

¹/₄ cup fresh lime juice (from 2 limes or bottled Key lime juice)

1 cup heavy cream

1 tablespoon confectioners' sugar

Lime zest for garnish

INSTRUCTIONS

- 1. In a large bowl, whisk the marshmallow creme, condensed milk and lime juice.
- 2. In a medium bowl and using an electric mixer on medium-high speed, beat the heavy cream and confectioners' sugar until stiff peaks form.
- 3. Add the whipped cream to the marshmallow creme mixture, and fold gently to blend.
- Top the dip with lime zest. 4
- Serve. Serve with Graham crackers, 5. cookies (such as Nilla Wafers), pound cake and/or fresh fruit for dipping.

ABOUT THE COOK >

NAME: Mary Bonhomme

FLORIDA TECH CONNECTION:

Professor Emerita. Extended Studies

RECIPE FUN FACT: Bonhomme first brought this appetizer to a work reunion in Florida with former colleagues from Cabot Corp. in Indiana. She wanted to bring the "Florida vibe" and thought this would do the trick!

chile powder can be purchased on Amazon or in some specialty shops.

*Tip! New Mexico

NIGERIAN JOLLOF RICE WITH CHICKEN Serves: 10

INGREDIENTS

4 pounds chicken, drumsticks and thighs 8 garlic cloves, peeled 2-inch ginger root, peeled and sliced into chunks 7 ¼ cups water, divided 1 large onion, diced 2 ½ teaspoons salt, divided 4 teaspoons chicken bouillon powder, divided 1 ½ cups vegetable oil for frying 6 cups jasmine or other long-grain rice 5 large Roma tomatoes 2 red bell peppers 2 habanero peppers 2 bay leaves 1 (12-ounce) can tomato paste 1 teaspoon dried thyme

1 teaspoon curry

INSTRUCTIONS

CHICKEN STOCK

- 1. Season the chicken with salt and pepper to taste. Place in a large pot.
- Add the garlic, ginger and about ¼ cup of water to a blender, then blend to create a paste.
- To the pot, add about ¼ of the chopped onion, 2 tablespoons of the garlic-and-ginger paste, 1½ teaspoons of salt and 2 teaspoons of chicken bouillon powder. Toss everything together.
- Add 3 cups of water to the pot, and bring to a boil on high heat. Then, reduce the heat to medium, and simmer for about 18 minutes.
- 5. Use a frying spoon to remove the chicken from the stock, and set it in a colander to drain. Set aside 2 cups of the stock.

FRIED CHICKEN

- 1. Fill a frying pan with up to 2 inches of oil, and bring to medium-high heat. When the oil is hot enough, add the chicken and cook until it's golden brown, then flip to the other side and repeat.
- Remove the chicken from the pan, and place it on paper towels to drain any extra oil. Set aside 1 cup of the frying oil, and let it cool before using it to cook the rice.



ABOUT THE COOK

NAME: Oreoluwa Ariyibi

FLORIDA TECH

CONNECTION:

'23 B.S., information systems

RECIPE FUN FACT:

Jollof rice originates from the

Senegambian area, where the

Wolof or Jolof Empire domi-

nated in the 14th century. It is a

staple meal in African countries

such as Ghana, Senegal and

Nigeria—where Ariyibi is from

and learned to make the dish

from her mother.

RICE

- 1. To get rid of extra starch, wash the rice by rinsing it in water three to four times. Set aside.
- 2. Add the Roma tomatoes, red bell peppers and habanero peppers to a blender, and blend into a paste. Gradually, add 2 cups of water and blend.
- 3. Transfer the tomato puree to a medium saucepan. Simmer for about 20 minutes without stirring.
- 4. Place the reserved 1 cup of oil into a heavy-bottomed or nonstick saucepan, and bring to medium-low heat. Add the remaining onions and the bay leaves, stirring occasionally for two minutes, or until they are aromatic.
- 5. Add the tomato paste, and fry until the sour taste is gone. Then, add the boiled tomatoes, bring to a boil and simmer on medium heat for about 20 minutes or until the sauce starts to thicken and adhere to the bottom of the saucepan.
- 6. Add the dried thyme and 1 teaspoon of curry, and whisk to let the flavor come through.
- 7. Add the remaining garlic-and-ginger paste, stir and simmer for about 2 minutes.
- 8. Add the cleaned rice to the tomato sauce, and thoroughly stir.
- 9. Add the reserved chicken stock and the remaining 1 teaspoon of salt and 2 teaspoons of chicken bouillon powder. Stir to combine.
- Add 1–2 cups of water to the saucepan, and cover completely with aluminum foil to keep the steam within the pot. Turn the heat to low, and cover the pot with its lid.
- 11. Cook the rice for 20 minutes, then stir (carefully, to avoid breaking the grains) and check its tenderness.
- 12. Place the foil and lid back on the pot, and cook another 20 minutes.
- 13. Remove the lid and foil, fluff the rice with a fork and remove the bay leaves.
- 14. Serve with the fried chicken. Note: You may want to serve with salad or coleslaw.

NICKLOW CHILI Serves: 16 (2-cup servings)

INGREDIENTS

4 tablespoons canola oil, divided

4 pounds boneless beef roast (chuck, round or rump) trimmed, cut into 1-inch cubes

2 pounds loose chorizo sausage

2 large onions, diced

2 red peppers, diced

2 fresh jalapeños, stemmed, seeded and minced

8 garlic cloves, minced

2 teaspoons cumin

2 teaspoons dried oregano

1 teaspoon salt

2 teaspoons black pepper

2 tablespoons chili powder

1/2 teaspoon crushed red pepper flakes

2 cups beef stock

4 (14.5-ounce) cans diced tomatoes (regular or fire-roasted)

3 (10-ounce) cans red enchilada sauce 2 (16-ounce) cans chili beans with sauce 2 (15-ounce) cans black beans, rinsed 1/2 cup flour 1 cup water

NAME:

John Nicklow

CHEF'S TOUCH:

For serving: add shredded cheese, sour cream, fresh cilantro and/or sliced green onions

INSTRUCTIONS

- 1. In a large Dutch oven, heat 1 tablespoon of oil over medium-high heat. Add cubed beef roast in batches, adding another tablespoon of oil as needed. Cook each batch until brown. Drain and set aside.
- 2. In the same pan, cook the chorizo until brown. Drain and set aside.
- 3. Add remaining 2 tablespoons of oil, onions, red peppers, jalapeños and garlic until softened. Remove vegetables and drain excess oil from the pot.
- Return meat and vegetables to the pot. Add cumin, oregano, salt, pepper, chili powder 4. and crushed red pepper flakes, and stir.
- Add beef stock, tomatoes, enchilada sauce, chili beans and rinsed black beans. 5 Cover and bring to a boil.
- 6. Reduce heat and simmer, covered, for 2 hours, stirring occasionally.
- 7. Uncover, simmer for another 45 minutes.
- In a small bowl, whisk flour and water until smooth. Add to pot and stir. 8.
- 9. Cook chili for another 30 minutes. Remove from heat, and let sit for 15 minutes.
- 10. Serve.



RECIPE FUN FACT: President Nicklow has won several neighborhood chili contests with this recipe that he created by combining the best ideas from at least six recipes—and a lot of trial and error.

CLASSICS



^ ABOUT THE COOK

NAME: Stacy Nicklow

FLORIDA TECH CONNECTION: First Spouse

RECIPE FUN FACT: Nicklow wanted a "grown up" version of macaroni and cheese that would be worthy of serving on

holidays. She knew that different types of cheese and a good béchamel sauce would be key. Lots of trial and error led her to this version, which is a family favorite every holiday!

DR. STACY'S MACARONI AND CHEESE Serves: 8

INGREDIENTS

- 5 tablespoons butter
- 5 tablespoons flour
- 1 teaspoon salt
- 1/2 teaspoon pepper
- 1/2 teaspoon dry mustard
- 3¹/₂ cups whole milk

16 ounces pasta (small-shaped, such as shells, elbows, rotini or bowties)

1¹/₄ cups shredded extra/seriously sharp cheddar cheese

1¹/₄ cups shredded mild cheddar cheese or smoked cheddar

1¹/₄ cups shredded colby jack or gouda cheese

1/2 cup panko breadcrumbs

Paprika to taste

INSTRUCTIONS

- 1. Preheat oven to 350°F.
- In a double boiler, melt butter over boiling water. Add flour, salt, 2 pepper and mustard. Whisk until well blended.
- 3. Add milk gradually, whisking constantly, until fully incorporated. Cook over boiling water until mixture is thick and no starchy taste remains, about 15 minutes.
- 4 Cook pasta in boiling, salted water for one minute short of package directions for al dente. Drain.
- Spray a deep (2¹/₂- to 3-quart) casserole dish with nonstick cooking 5. spray. Place a layer of pasta on the bottom of the dish, and sprinkle with 1/3 cup of each type of cheese.
- 6. Spoon ¹/₃ of the sauce over the cheese.
- Continue to add alternating layers of pasta, cheese and sauce for 7. 3 total lavers.
- Sprinkle top with remaining cheese, cover with breadcrumbs and a 8. sprinkle of paprika.
- Bake uncovered for 20 minutes until brown and bubbly. 9



Far Away, Where the Learning is Everywhere

Summer field research course immerses students in the sights, sounds and science of the Galápagos

By Adam Lowenstein | Photos by Rich Aronson

It wasn't the usual classroom or the usual classmates.

Madison Zerona, a marine biology senior at Florida Tech, was snorkeling at Kicker Rock off San Cristóbal Island in the Galápagos archipelago this summer, joined by scalloped hammerhead sharks, Galápagos sharks and large sea turtles.

"It still gives me shivers," she says, weeks after the thrilling experience. "It's amazing how animals in the Galápagos do not see humans as threats and are all very calm around us."

It is pretty amazing, as well, to see lessons studied on Florida Tech's Melbourne campus brought to life in one of the most significant scientific environments in the world.

"Traveling with a group of enthusiastic scientists and two experienced guides through what feels like another planet, you really get to learn a lot in such a short time span," Zerona says. "I was able to take what I learned in the classroom and apply it in the field by collecting data and learning how to analyze it quickly. The information really clicks in Green turtles are endangered worldwide, but they are a common sight for snorkelers at Kicker Rock off San Cristóbal Island. Because they are protected in the Galápagos, the sea turtles are not afraid of people. A Sally Lightfoot crab moves through the mangroves on Santa Cruz Island. These crabs live on tropical shores worldwide, but the bright-red coloration is unique to the Galápagos.

Traveling ... through what feels like another planet, you really get to learn a lot in such a short time span."

-Madison Zerona, marine biology senior





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your head when you are able to witness it in real life."

The class is Field Biology and Evolution of the Galápagos Islands, one of several summer field research courses offered at Florida Tech.

"I think this type of experiential learning is very beneficial. It gets people out of the classroom and actually experiencing the world and the environment," says fellow traveler and marine biology student Joshua Ahrens. "Biology field courses especially work well because it's hard to learn about the ecology side of biology without some form of visualization, and what's better visualization than being in the ecosystem itself? It really helps complete the whole learning experience."

Richard Aronson, a marine biologist, professor and department head in ocean engineering and marine sciences, led the 2023 Galápagos expedition. Working with his colleague and friend Professor Mark Bush, Aronson has taught or co-taught nearly a dozen trips to both the Galápagos and the Amazon, courses that Bush launched in the early aughts. (Bush was unable to attend this trip due to an ankle injury from an earlier field expedition.)

Involving 20 students and days of travel by car, plane, boat and foot, the trips currently cost about \$4,700 per student for everything, including all travel expenses and three college credits for the class. Accommodations in the Galápagos are generally modest hotels, and internet service is spotty. No one complains.

"I signed up for this trip because it was a once-in-a-lifetime opportunity to travel to the Galápagos Islands, a place you've been learning about since elementary school," Zerona says. "The price is well worth the credits, and it's a jam-packed Waved albatrosses spend much of the year at sea, feeding on fish and squid. They fly to Española Island to breed from April through August. Like most wildlife in the Galápagos, the albatrosses ignore human visitors and go about the business of making their nests, courting, incubating their eggs and raising their young.

▼ A Galápagos land iguana warms itself on the volcanic rocks of North Seymour Island. Three species of land iguanas inhabit the archipelago. They are endemic, meaning they are found nowhere else in the world. The iguanas eat tree cactuses, which are also endemic.



Everywhere you look is science; everything you see is a lesson come to life."

-Richard Aronson, professor and department head in ocean engineering and marine sciences

trip that you didn't have to do any of the planning for, with meals included."

Aronson remembers that his own family used its modest surplus income to travel, teaching him its value and the power of firsthand experiences.

"When you travel, you learn," he says. You learn, but you learn amid what





▲ Giant tortoises once inhabited many islands in the tropical Indo-Pacific, but they were hunted for food by whalers on ocean voyages. Today, there are 15 endemic species in the Galápagos. These two males in the highlands of Santa Cruz Island are fighting over a female.

On the beaches of the Galápagos, visitors can see hundreds of sea lions snoozing in the sun. Underwater, they are curious and playful, swimming circles around snorkelers but staying just out of reach. This young sea lion was photographed at Isabela Island.

The Galápagos penguin, like this one from Isabela Island, is endemic and the only equatorial penguin species. Penguins are normally found in southern South America and Antarctica, but Galápagos penguins live side by side with pelicans, boobies and other tropical seabirds.

he called "intangibles and collaterals" encountered only on these journeys: the scents and sounds, the emotions.

"You see something that you've never seen before. Not only have you not seen it before, but it's incredibly dramatic, and you think, 'Oh my God, I'm looking at a waved albatross sitting on its egg. I never thought I'd see that,'" Aronson says. "It does something to your mind, and in a good way."

The sensation of seeing a unique animal in real life plays out many times on the field research trips, given the diversity of the Galápagos Islands. Giant tortoises, lava lizards, swallow-tailed gulls, Darwin's finches, Galápagos penguins, blue-footed boobies, pintail ducks—those are just some of the terrestrial critters. Others, such as sharks and sea turtles, as well as sea lions and large, colorful fish, are on view for snorkelers and divers. Upwelling of nutrient-rich waters feeds the plankton that support all the fabulous sea creatures, as well as the large population of seabirds.

"There were absolutely stunning views both under and above the water, as well as some of the most beautiful animals I've ever seen," Ahrens says. "The amazing thing, as well, is that all of those animals were truly wild. Seeing that much biodiversity in such a relatively undisturbed habitat was an incredible experience. My expectations were high, and they might've even been exceeded."

As part of the class, students conduct surveys of marine life to test hypotheses, such as whether having larger populations of sea urchins and parrotfish means there is less seaweed around.

"Simple stuff, but important," Aronson says.

They then write papers about their analyses.

Students also must keep a journal, essentially a naturalist's log. It features

thoughts about what they are seeing but also about their feelings and experiences.

They also must be prepared for some serious walking. Among the most challenging is a rough, 10-mile hike along the rim of the Sierra Negra volcano on Isabela Island. The first part is straight uphill, Aronson says—"a total kick in the shorts." After they view the volcano's caldera, a large volcanic crater, the walk takes the group through the rough terrain of a scenic lava field called Volcan Chico, a "parasitic cone" on the flank of the Sierra Negra.

"This is not a vacation," Aronson says. "We push hard, both physically and mentally."

He adds, "Everywhere you look is science; everything you see is a lesson come to life. In the rain, drifting with the ocean currents, on 10-mile hikes—and no one would change a thing."

A MESSAGE FROM THE FLORIDA TECH ALUMNI ASSOCIATION

Dear fellow alumni,

Exciting times are ahead of us, not only for the alumni association, but for the whole university, as we welcome Florida Tech's new president, Dr. John Nicklow!

I was fortunate enough to represent the alumni association during the presidential selection process and interviewed Dr. Nicklow personally as part of a team that included representatives from across the university.

I want to commend **TRAVIS PROCTOR** '98, board of trustees chairman, for making this process open, fair, inclusive and just. Out of the five finalists, who are all amazing people, Dr. Nicklow stood out as someone serious about fostering change and doing so in a sound, methodical, progressive and strategic way. His experience and background have proven him to be a progress-minded leader, and his personality exudes that confidence and ability to make the right decisions. (Learn more about President Nicklow and his wife, Dr. Stacy Nicklow, on page 18.)

Even before he officially started at Florida Tech July 1, Dr. Nicklow had reached out to the alumni association, and he has already put together a large steering committee with representation from across the university's students, faculty, staff and alumni to begin work on a strategic vision. Talk about being proactive! I believe Dr. Nicklow is exactly what this university needs to become even greater!

As my term as Florida Tech Alumni Association president comes to an end this November, I am beyond proud that we, as an association, have successfully navigated difficult changes and challenges at Florida Tech, and that we have stayed resilient in doing our best to help the university and its alumni and students to progress and foster the legacy of university founder Jerome Keuper.

I have done my best to ensure that the alumni association always has a voice and that we remain an integral part of the university. In July, we had a successful alumni board retreat during which we—with the aid of our association board members, the Office of Alumni Affairs and the Office of Advancement—created a plan to improve the association and assist the new president in establishing a strategic vision/plan.

For now, I would like to thank all of those involved in the alumni association for their support during my tenure as president. The future looks bright for Florida Tech, and I am beyond excited to see what's next.

Ad astra, Panthers!



YOUR ALUMNI ASSOCIATION OFFICERS

Fin Bonset '96, '99 MSA President | Indialantic, FL | fbonset@vhb.com

Sherry Acanfora-Ruohomaki '93, '00, '05 M.S. Vice President | Melbourne, FL | sherry@k9kampus.com

Chad Shoultz '96 Treasurer | Indialantic, FL | ccshoultz@icloud.com

Warren Pittorie 115, 118 M.S. Secretary | Melbourne, FL | wpittorie2012@fit.edu

Chris Fernando '02 Member-at-Large | Raleigh, NC | cfernando@gmail.com

Kim Bozik '87 Past President | Chandler, AZ | kim.bozik@regan.com

SUBMIT YOUR NEWS TO alumnotes@fit.edu

1970s

1 CHARLES "CHUCK"

MOORE '72 A.S., '73, '74, is a retired U.S. Navy, Air Florida, Alaskan bush, and U.S. Fish & Wildlife Services pilot. Today, he flies personal airplanes and helicopters.

RICHARD WILKE '76 is retiring after working 43 years at the Brookhaven National Laboratory.



2 BRIAN USIAK '81 A.S. welcomed his granddaughter, Anika Hawk, who will hopefully be a Panther someday, in January.

DAVID BINDER '82 A.S. was appointed assistant commissioner of the Florida Department of Law Enforcement and serves as Florida's homeland security advisor. He and his wife, Valerie, reside in Tallahassee, Florida.

3 RICHARD "RICK" ROY

'83 has accepted a new position as a scientific account manager at Genedata. This summer, he and his wife, Deb, will celebrate their 35th wedding anniversary.

MARC JAIME '85 is a handling, mechanical and structures engineering manager for TOSC, where he has hired multiple Florida Tech graduates and currently employs six recent grads in his group. Jaime's family is full of Panthers, including his wife, Lynn Jaime, who is the associate director of Florida



Reconnect with Panthers Near You!

About 75 Panthers attended the 2023 Boston Alumni Reception May 18 at the Boston Marriott Long Wharf (pictured). Florida Tech hosts regular networking receptions for Panthers all over the world, giving alumni the chance to reconnect with the university and former classmates, create new connections with local alumni and learn about the latest university developments. Scan the QR code to see when we're visiting a city near you!



Tech's All Faiths Center, and his two children **PAUL JAIME** '22 and **ALLYN JAIME** '23.

VIKRAM "VIK" VERMA

'87 was appointed chairman of the board of directors for SecureAuth, a leader in next-generation authentication and access management.

4 JAMES "JIM" CHILTON

'88 M.S. was awarded the 2023 Kurt W. Debus award from the National Space Club, Florida Committee (NSCFL). Chilton is the senior vice president of space and launch at Boeing's defense, space and security division. (Pictured (middle) with Rob Salonen, Florida Tech government affairs and strategic partnerships director (left) and Martin Gallagher, Evans Library digital scholarship lab support manager (right))

EDWARD THOMAS JR.

'89, Ph.D., was appointed dean of the College of Sciences and Mathematics at Auburn University. He is the first dean of the college who also holds a doctorate from Auburn University.



5 SHARON EVANS

'90 M.S., '92 Psy.D., welcomed another beautiful grandchild, Yair Yehuda.

6 THOMAS "TOM" GARTHWAITE '92 M.S.

was selected as president of Winter Haven and Winter Haven Women's hospitals.

7 JEFFREY NOVAK '95

is a registered architect and senior design project manager based in Irvine, California, with The Austin Company and is working on two new, high-profile projects for L3Harris Technologies Inc.

RICHARD BURNETT

'97, '99 M.S., accepted a new position as principal engineer at ARM.

8 DEBORAH (BAUGH) MCLEMORE '97 M.S. is

approaching 30 years with the U.S. Army and Department of Defense as a logistician and program manager.

DONALD "JAY" STINSON

'97 M.S.is a business consultant with Schneider Electric's North American digital grid group.

HENRY CASTELLANOS

'98 A.S., '00, received the Grand Champion Award at Jets Over Kentucky, the world's largest jet event.

LISA SPADAFINA '98

has been named the top official for Miami-Dade County's Department of Environmental Resource Management (DERM).

9 KRISTIN WHITE '99,

'04, was selected as deputy regional director of operations for the Bureau of Reclamation California-Great Basin Region.

2000s

THEON DANET '00 MBA has been appointed acting deputy director and chief operating officer of the Defense Commissary Agency.

SERENA THOMAS '01 is a field sales leader at USHealth Advisors, where she has worked for seven years.

RUSSELL DEATHERAGE

'02, '17 MBA, began working as an IT manager at Northrop Grumman Corp., supporting multiple programs and initiatives in the BWI area within Marvland.

BRYAN JONES '03 M.S.

was promoted to construction president of Hourigan Group, a Richmond, Virginia-based construction and development firm.

10 MICHAEL "MIKE"

SEARS '03 M.S. started a new position as director of foreign military sales for Honeywell Aerospace, defense and space.

JAMES "WES" MCDANIEL

JR. '04 MBA, '10 MBA, is the director of customer experience for Greystar.

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Welcomed a Panther Cub?

Contact us for a free infant T-shirt, bib or onesie. Then, send a photo of your cub in his/her Panther swag with an AlumNote about yourself, and it may appear in the magazine.

For details: alumni@fit.edu

By day, **JAZMIN TRUESDALE**

'11 MBA works in the tech industry. But by night, she transforms into a superhero on the pages of *Aza Comics*.

Growing up, Truesdale loved reading comic books and watching superhero movies, but she noticed one major flaw: a lack of women in leading hero roles, particularly in films.

"It was always male characters with the females as supporting side roles. No one was doing anything with their female superheroes at the time," Truesdale says. She remembers thinking, "Well, I can change that."

Inspired by her favorite superhero, Wonder Woman, Truesdale started brainstorming her comic series, *The Keepers: Origins*.

She created a digital video trailer for the series: a spacefantasy adventure starring a team of diverse, female superheroes.

At first, she received negative feedback from agents, who advised her to switch the leading Black superheroine's race to white for better publishing, but Truesdale put her foot down to ensure that girls like her could see themselves in comic books.



SPOTLIGHT ON Jazmin Truesdale

FLORIDA TECH CONNECTION: '11 MBA

FAVORITE SUPERHERO MOVIE: "Wonder Woman," starring Gal Gadot

SUPERPOWER: Flight

RELAXING ACTIVITY: Working out

REAL-LIFE SUPERHERO: Janet Jackson

FAVORITE FLORIDA TECH MEMORY: My capstone course. I have carried the skills that I learned in that class into Aza Entertainment for when I'm coming up with product lines and how I want to go about things in the business.

"A lot of the characters are based on real people who inspired me growing up," she says. "My leading black female character, whom I was told would be unmarketable, is my most popular character."

Once the framework of her story was complete, Truesdale started sending the trailer to other industry giants for advice and guidance on what her next steps should be.

The connections she made through the process led her to become a panelist at comic-cons throughout the U.S., where she presented her ideas to the people who would be directly consuming them. To Truesdale's surprise, her sessions sold out so fast that event staff had to bring in extra seating.

"The concept of this universe with strong female characters resonated. My room was predominantly women, and it was fascinating to see that response," she says.

Originally, Truesdale planned to hire writers to create her comic book universe, but after her presentation, the writers of *The Walking Dead* comic book series approached her and persuaded her to write the story herself.

She got to work, and the rest is "her-story!"

Today, Truesdale is the founder of AZA Entertainment, a production company centered on telling the stories of women with diverse backgrounds.

"It always starts with one," Truesdale says. "Just be resourceful, find a way and always keep trying."

—Erin Alvarado

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COL. RONNIE D. ANDERSON

JR. '05 M.S. became the 14th commander of the Joint Munitions Command in June. Anderson has served in the military for the past 31 years.

11 RACHEL SIMPSON

'09 M.S. became quality assurance associate director at BioAgilytix in Research Triangle Park, North Carolina.

2010s

MUZAMMIL ARSHAD

'10 M.S., '18 Ph.D., was promoted to associate professor at Texas A&M University in June. He also authored a textbook on fluid mechanics and power using the latest pedagogical trends for student success and learning.

12 GABRIELLE DELELLIS

'10 moved back to Brevard County and accepted a position as a clinical staff pharmacist at Palm Bay Hospital.

13 CHANDEL ADAM '11

joined TaylorMade Golf as a safety and sustainability program manager. Previously, she completed two environmental-based master's degrees and worked as a consultant, as well as within the industry.

CECILIA DOCKERY'11

accepted a new position as assistant director of programs for Clery Center.

JASON DORAN '11 MBA is the director of account management for Ontic, a software company based in Austin, Texas.

GAËL LE BRIS '11 MSA was promoted to vice president of aviation planning with WSP, one of the world's leading engineering professional services firms. Le Bris and **LOUP-GIANG NGUYEN** '19 MSA are among the lead authors of "ACRP Research Report 243: Urban Air Mobility: An Airport Perspective." The research effort was conducted for the Transportation Research Board, a division of the National Academies













of Sciences, Engineering, and Medicine based in Washington, D.C.

MARCIA BRYANT '13 MBA

is the director of case management at Encompass Health in Broken Arrow, Oklahoma.

14 AKSHAY HIREMATH

'13 M.S. is working as a power and performance engineer at Intel. He is currently working on building and powering the world's best high-performance CPUs and next-generation CPUs.

OMAR GALIL '14, '17 M.S., welcomed a baby and was promoted to senior consultant with Deloitte.

15 JASHELLE OJEDA

'14 works for Sargent and Lundy as a nuclear I&C engineer after serving eight years in the U.S. Navy.

ROBERT COLLINS '15 MBA accepted a position with Arizona State University as a project manager overseeing programs and projects for the enterprise technology group.

EMILY (SYBO) GLATZ

'15 was promoted to talent acquisition specialist II at Ansys and is now responsible for recruitment in North America for all the mechanical and fluids product teams.

16 SHERISSE PIERRE

'15, '17 M.S., (left) flew with Caribbean Airlines' first ATR all-female crew.

17 TYLER SEIDMAN '15

will soon finish his psychiatry residency at the University of Central Florida-Gainesville and has accepted a position at Viera VA Clinic in Melbourne. In 2021, Seidman married **HEATHER LEMIEUX** '15 after they met their freshman year at Florida Tech's Roberts Hall.

ELIOT JOYNER '16 A.A., '16, began working for Lockheed Martin Corp. as a senior program security officer focusing on advising for cutting-edge technologies that protect the United States.

MONICA STILLSON '16

accepted a position at EY as a senior analyst in its financial services organization.

MARILYN ZAJAC '16

became the south region energy advisor at FirstService Energy, based out of Miami.

DIEGO D'IGNAZI DE DOMENICO '17 started a new role as an R&D senior solution engineer at Alascom in Milan.

JENNIFER "JENNI" HOLMAN '17 M.S. accepted a position as human resources generalist with Avalon International Aluminum LLC.

GARY HOLMES JR. '17, '19 MBA, was promoted to principal system test engineer on the E-2 program at Northrop Grumman Corp.

KATIE MANRIQUE '17,

'18 M.S. presented her research on acute kidney injury postlung transplantation at the International Society for Heart and Lung Transplantation annual conference in April.

ANTON MEDVEDEV '17 was hired as a senior software engineer at Bluevine, a Silicon Valley-based financial technology startup aiming to help provide funding and financial services to businesses all around the United States.

KARTIKEYA SHARMA

'17, '19 M.S., is a lead cybersecurity consultant at Ernst & Young.

PAUL BERSOUX '18 is celebrating 10 years with L3Harris Technologies Inc. and received a promotion to

deputy operations manager.

STEVEN FARRIS '18 MBA was promoted to manager of programs at Northrop Grumman Corp. in January.

NILABH KAJAVE

'18 M.S., '21 Ph.D., was promoted to product development lead scientist with Humabiologics Inc.

KLARA SCRIPTER '18 is a high school biology teacher at Pineapple Cove Classical Academy, a charter school in Palm Bay, Florida. Four of her graduating students this year were accepted to Florida Tech and received generous scholarships.

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J.D. DUFF '78 A.S. grew up with a passion for scuba diving.

Originally from Maryland, Duff became a certified scuba diver at age 17, after he was inspired by the television show "Sea Hunt."

"I grew up diving in the Maryland area, but the conditions were terrible," Duff says. "I wanted to go away from home for college and started looking at schools in Florida and ended up picking Florida Tech's Jensen Beach campus for its underwater technology program."

While attending Florida Tech, Duff and his friends would spend their weekends driving to West Palm Beach, Florida, and diving at The Scuba Club, a popular establishment for diving enthusiasts.

After multiple trips to the club, Duff and his friends caught the attention of its owners, who offered them part-time employment in exchange for free diving. Once graduation came, Duff said goodbye to The Scuba Club and moved back to Maryland to start working for a small commercial diving company.



SPOTLIGHT ON

FLORIDA TECH CONNECTION: '78 A.S. underwater technology

FAVORITE SCUBA DIVING LOCATION: Cocos Island in Costa Rica

IF YOU COULD BE AN ANIMAL: Hammerhead shark

FAVORITE HOBBY: Traveling with my wife in our RV

LAST MOVIE YOU SAW: "Top Gun: Maverick"

FAVORITE FLORIDA TECH MEMORY: Having the opportunity to wear a U.S. Navy Mark V dive helmet during a whole quarter for a summer surface-supplied dive class.

Six months later, Duff received a phone call from The Scuba Club's owners, offering him a fulltime position at their new facility. Duff accepted the position and moved back to Florida less than a month later.

Duff went on to work at The Scuba Club for over 35 years and eventually purchased the store with a close friend in 2015.

"I wore all the hats and did everything behind the scenes, including our social media, captaining the store's boat, chartering international dive trips, managing the retail store, staffing and teaching certification classes on-site and at local colleges."

After more than 42 years in the industry, Duff decided it was time to retire and sold The Scuba Club to new management in March.

Duff now owns and operates a scuba tour agency in North Palm Beach, Florida, where he teaches professional scuba classes, certifies boat captains, provides dive business consulting services, charters international dive trips and captures underwater photography/videography for various publications, such as *National Geographic* and *Animal Planet*.

Throughout his career, Duff has certified over 5,000 students, led more than 75 international dive trips, spent more than 40 years as a U.S. Coast Guard-licensed captain and completed 10,000-plus dives, with no plans of stopping anytime soon.

"Stick with whatever you want to do," Duff advises fellow Panthers. "People told me, 'Oh, you won't make any money in the dive business; it's just a stepping stone to go somewhere else.' But, here I am!"

—Erin Alvarado

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18 ASHWIN SOMALINGA

SURESH '18 M.S. accepted the position of molecular scientist II with Southwest Labs, conducting sophisticated human molecular diagnostics for intricate infectious diseases within a clinical laboratory setting.

AMY TAYLOR '18 MBA was promoted to senior marketing manager at Marriott International, where she oversees marketing strategy for two resorts in the southeast.

REED ANTONICH '19

accepted a role with Sierra Space to help fly its Dream Chaser spaceplane when launches begin in 2024.

LUIS FREILE MONTALVO

'19 started a new position as a first officer with SkyWest Airlines based out of Chicago.

SHAULA REY '19 received Lockheed Martin Corp.'s Evening of Excellence Award for her work in digital transformation, one of the highest recognitions in the organization (only 0.0008% of the employee population receives it).

19 KAITLIN SPIROS

'19 MBA is a contracts manager between Northrop Grumman Corp. and the U.S. Department of Defense.

GLENESHIA WAUL '19

accepted a new position as a life solutions specialist with USAA. She also recently got engaged and finished building a custom home in Tampa, Florida.



20 SGT. SUSAN "DAWN"

HEYSE '20 M.A. and her husband, Kenneth Bouchard, are proud to announce that their son Brendan has been accepted to study biomedical engineering at Florida Tech.

LOGAN SMITH '20 M.S.

joined the Department of Veterans Affairs as a senior IT specialist.



21 FAHAD ALSULIMAN

'21 M.S. was appointed senior manager in technical delivery at Thigah.

ZACHARY BEHLOK '21 A.S.,

'22 A.A., '22, published his latest book, *Questioning Death and Other Essays*, which is a collection of 11 previously unpublished critical and creative essays that he wrote during the early stages of the COVID-19 pandemic between 2020 and 2021.

MICHAEL BURN '21 MBA is a program manager with

Tomahawk Robotics.

MICHAEL P. CARROLL

'21 started a new position as a plant operator with H2O Innovation in Gulfport, Mississippi.

ROBERT "SEAN" CATRON

'21 accepted an RF engineering role with Lockheed Martin Missiles and Fire Control.

ROMANA ROUF

CHOWDHURY '21 MBA was reelected as the chairman of Bank Asia Securities Ltd. She is the managing director of Sea Natural Food Ltd., Sea Fishers Ltd. and Sea Resources Group.

JOEL COLBY '21 M.S. leveraged his Florida Tech degree to score a principal manufacturing engineer position at Northrop Grumman Corp. in Melbourne.

STEVEN PAZIENZA '21 was promoted to systems engineer II at Raytheon Technologies.

JENNIFER TURNER '21 MBA is an F-35 Tech Refresh 3 production test director.

SHIYUE "KATIE" YU

'21 is an associate product manager at Supermicro.

22 ABDULRAHMAN ALGHAMDI '22 M.S.

accepted a position as lab operations engineering specialist at Eurofins Lancaster Laboratories Co. in the global vaccine and biological commercialization department.

AMMAR YASIR ALJOHANI

'22 accepted a position as a site engineer with Saudi Bell Group, one of the largest companies specializing in X-rays at land ports, airports and ports.

CHASE BUBAK '22 works as a dragon technician for SpaceX in Cape Canaveral, Florida, where he is helping prepare the next crewed capsule to deliver astronauts to the International Space Station.

23 **SHANE CUPID** '22 MBA joined STEMBoard as a data analyst.

24 **RAMONE HEMPHILL SR.** '22 MBA, founder of The 99th Squadron Inc., received the Brigadier General Charles E. McGee Aviation Inspiration Award.

PAIGE HERR '22 began a new summer internship at MCI-Norfolk, the largest medium-security prison in Massachusetts. She is also the diversity, equity and inclusion advisor for Alpha Phi's Boston University chapter.

ROBERT IRVINE '22 A.A.,

'22 A.S., '22, moved to Houston in April to begin working for NASA as a contractor. He has been trained on how to do mission control for the first of three Mars analog missions at Johnson Space Center for a crew of four in a 3D-printed simulated Mars habitat and environment.

SIERRA KUCINSKI '22 M.A.

is a board-certified behavior analyst (BCBA). As such, she creates programming to address skill deficits and increase overall independence within tasks for children ages 2 to 18 with autism.

25 JONATHAN SHIMER

'22 was recruited by Charles Stark Draper Laboratories in Cape Canaveral, Florida, as a mechanical engineer upon graduation. (Pictured with his Florida Tech fraternity, Delta Tau Delta)

KRISTIAN STAMESKI

'22 accepted a new position as a flight test engineer with Northrop Grumman Corp. in Melbourne.

SARAH ALAMRI '23 M.S. graduated in the spring, earning her master's degree in biochemistry after facing many personal obstacles that tested her resilience, perseverance and dedication.

INMEMORIAM

DENNIS DISINGER '78

A.S., who earned his degree in electronics technology/ communications and was heavily involved in the creation of WFIT, passed away Dec. 5, 2022, in Boca Raton, Florida, at age 65.

JANIE PARK '79 M.S.,

'82 Ph.D., who served as associate dean of Florida Tech's College of Science and Liberal Arts for three years before going on to be Chadron State College's first female president from 2005 to 2012, passed away June 27 at age 76.

JOHN "JOHNNY" EKMAN JR.

'81 A.S., a graduate of Florida Tech's Jensen Beach campus, proud Navy veteran, scuba diver, canoer, ultimate Frisbee teammate, animal advocate and world traveler, passed away in Howardsville, Virginia, Dec. 15, 2022, at age 63.

JILL (CHOPAK) MUELLER

'81 A.S., '84, a Department of Defense (NAVSEA) chemical engineer who worked on naval submarines and retired after 35 years of service, passed away peacefully Jan. 2 at age 61 at her home in Annandale, Virginia.

THERESA "TERRY" MARIE BROWN '82.

'86 M.S., '87 Psy.D., passed away peacefully May 9 in Indialantic, Florida, at age 92.

CAPT. VINCENT PAUL

MERZ '91 MBA, a retired U.S. Navy captain and private sector senior executive, passed away June 11. He served for more than 26 years, and his contributions were most notable in antisubmarine warfare and naval aviation test and evaluation.

SAMUEL THORNTON

DURRANCE, a former Florida Tech physics and space sciences professor and astronomer who flew on two NASA space shuttle missions as a payload specialist, passed away May 5 at age 79.

PHILIP FARBER, a professor emeritus who taught in Florida Tech's School of Psychology for 40 years, passed away April 29 at age 73. Farber was among the school's most popular faculty members,

voted by the clinical student body as outstanding faculty professor, advisor and mentor on four occasions, and was among the inaugural winners of the Presidential Award for University Excellence in 2003.

JEAN ALICE FARMER,

known as Jeanne to many, passed away peacefully May 22 at her home in Melbourne at age 81. At Florida Tech, she and her husband, former board of trustees chairman Phillip Farmer, left a robust legacy, anchored by one of their most impactful gifts: the establishment of the Farmer Scholars Program, the university's most prestigious financial award.

ARTHUR LEE HOLT, a

professor emeritus who spent 11 years as a director and professor at Florida Tech extended studies sites, passed away April 19 at his home outside of Baltimore at age 101.

ERIK EDWARD JOH passed away peacefully May 5 at his home in Lake Worth, Florida, at age 78. Joh, a distinguished attorney and tireless volunteer, shared his expertise, vision and legal acumen with the Florida Tech community as a 25-year member of the university's board of trustees.

DEAN R. NORRIS, a

professor emeritus who served 26 years as a faculty member and leader in what was then the department of oceanography and ocean engineering, passed away June 12 after a lengthy illness.

F. ALAN SMITH, the generous Florida Tech benefactor with a distinguished career at General Motors Co. who served for nearly 30 years on the university's board of trustees, passed away June 2. Smith's generosity fueled the creation in 2007 of the F. Alan Smith Visiting Executive Program, now known as the F. Alan Smith Distinguished Lecture Series, a speaker series created to attract national leaders in a wide range of industries to campus.

DENNIS SOMMERS,

former Florida Tech men's soccer coach, passed away in June. He was an author and avid traveler.



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FACES OF GREATNESS

Home Court Advantage

New York-native communication and basketball alumna combines both passions in her leadership role with Madison Square Garden Entertainment Corp.

By Erin Alvarado

DINA (MEKAWI) DEPINA '03 is the senior vice president of creative studios & digital operations for Madison Square Garden Entertainment Corp. (MSG Entertainment) in New York City.

In this role, DePina oversees a wide range of studio and digital operations across the MSG family of companies, which also includes Madison Square Garden Sports Corp. and Sphere Entertainment Co. Her teams are responsible for creating, producing and archiving content across multiple media and digital platforms for brands and properties that include iconic venues (Madison Square Garden, Radio City Music Hall, Beacon Theatre, The Theater at MSG, The Chicago Theatre and Sphere); legendary sports franchises (New York Knicks and New York Rangers); and original productions ("Christmas Spectacular Starring the Radio City Rockettes").

"One day, I could be working on a commercial for the Knicks, the next day, prepping for the Christmas season with the Radio City Rockettes, and then the day after that, helping create content for our newest venue, Sphere, that's opening in Las Vegas," DePina says. "I'm constantly learning and switching gears to figure out how to move from one thing to the next."

Growing up in New York City, DePina longed to go to college somewhere sunny with a beach but that also had a great basketball program. After researching NCAA Division II schools, DePina toured Florida Tech and fell in love with the campus.

She joined the women's basketball team as a walk-on during her freshman

year. She credits much of her amazing college experience to head coach John Reynolds.

"We still keep in touch to this day. He kept me on track throughout my collegiate experience," DePina says. "He took a chance by putting me on the team and really helped build my athletic career at Florida Tech."

DePina and the Florida Tech women's basketball team made school history in 2002 as the first team to advance to the Elite Eight. She was inducted into the Florida Tech Sports Hall of Fame with the rest of her teammates in 2014.

DePina's love for production started during her summer internship with the launch of *Teen Vogue* magazine. The credits she received from the internship helped her graduate a semester early and sparked her interest in the magazine industry.

After graduation, DePina moved back to New York City and spent the next few years freelancing for different magazines. Her goal was to find the segment of the industry into which she wanted to dive deeper.

She went on to work in the *Allure* magazine production offices for six years.

After her time with *Allure*, DePina continued to work for over 10 years in the fashion industry with brands such as Calvin Klein and Ralph Lauren, but her ultimate goal was to break into the sports industry.

"If there's something that you're really passionate about, just stick with it, keep applying, keep interviewing



FLORIDA TECH CONNECTION: '03 B.S. communication

BUCKET LIST: Take my son to visit my home country of Egypt and travel the world as a family

FAVORITE FLORIDA TECH MEMORY:

Traveling to the Elite Eight women's basketball tournament with my teammates and witnessing some of them see snow for the first time

and keep meeting people. It's always important to not give up," DePina says.

In March 2017, DePina accomplished her goal when MSG hired her to build its in-house production department. This meant working on campaigns for brands including the New York Knicks and New York Rangers and content for the company's entertainment venues.

Her campaign work with these teams has earned DePina an Emmy nomination and multiple Clio Awards.

Her role has continued to expand over the last six years, and today, she not only manages production for the portfolio of brands but also oversees the websites, apps and archives.

"I'm fortunate to work at a company where my job has evolved almost every single year, whether it's working on new brands or new functions. I'm constantly learning, and that helps me be happy and passionate about my job and what I do."



Office of Marketing and Communications

Florida Institute of Technology 150 W. University Blvd. Melbourne, FL 32901-6975



Forward Together. Boundless Potential.

Florida Tech is celebrating 65 years of excellent education, revolutionary research and inspiring innovation. This university that began its life as "Countdown College" has rocketed into stardom from humble beginnings as a "night school for missilemen." The university's first permanent building, now called the John E. Miller Office Building (pictured here), was constructed on the side of a dirt road among a few trees and not much else.

Today, with a campus that spans 130 subtropical acres and boasts a 15-acre botanical garden, as well as several stateof-the-art facilities, both academic and recreational, and cutting-edge research laboratories, Florida Tech has burgeoned into a premier scientific and technological university whose impact reaches around the globe.

In these 65 years, more than 70,000 alumni have shared their passion, brilliance and Panther Pride through outstanding contributions in industry, education and public service.

Let us celebrate the bold vision of our distinguished new president, the boundless potential of our university and our shared journey forward—together.







Photos courtesy of the Harry P. Weber University Archives