

FLORIDA TECH

M A G A Z I N E

WINTER 2024



HOW
WE'LL
WEATHER
WHAT'S
NEXT

Florida Tech faculty and alumni tackle the challenges of **EXTREME WEATHER** to create a world that is safer and better for everyone.

Plus! Results from the **BIG, FUN FLORIDA TECH ALUMNI SURVEY**

In This Issue

Winter 2024 • Volume 32, Issue 3

Soccer Success

Florida Tech's 2023 soccer season was one for the record books, as both the men's and women's teams reached the Final Four, becoming the first Division II school to have both teams reach the national semifinal since 2007. It was the teams' first berths since 2010 and 1993 for the women and men, respectively. National Player of the Year Sjur Dreschler (top, left) led the men, while All-American Maren Ndiongue (bottom, right) led the women.



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A MESSAGE FROM THE PRESIDENT

Dear Florida Tech family,

I can easily say that my first few months have been busy. I've been busy listening and learning, stressing visibility and engagement. What has that activity involved?

I've made visits to and had great discussions with each college and department, also meeting with the Parent Leadership Council, Alumni Board, college advisory councils, President's Circle and more. I've engaged with chambers of commerce, community organizations, economic development organizations, elected state leaders and corporate leadership.

We've ramped up our regional and statewide alumni receptions, with plans for Washington, D.C., Denver, Los Angeles, Seattle, San Jose and more in the spring—I hope you'll join us, and I look forward to meeting you!

Why are we doing this? Because Florida Tech must be highly visible, must be engaged and must be seen as a full partner in our community and well beyond to remain relevant and remembered and to be thought of as a first choice for prospective students, their families and our partners.

Important work like this should always begin with a plan, and our strategic planning process is proceeding well. Since July, we've captured feedback from five peer institutions, 716 students, 464 faculty and staff, 41 steering committee members, 14 board members and four of Florida Tech's top employers. This rounds out to more than 1,200 voices shared to develop our new strategic plan and our vision for the future. The board of trustees endorsed these plans in January. From here, we'll all work together to execute and monitor our success. Stay tuned for how you can get involved with the implementation of this important initiative.

I encourage you to stay engaged with Florida Tech, as I know we have some of our most exciting days ahead. See you soon, and Go Panthers!

Sincerely,
John Nicklow, Ph.D.
President



FLORIDA TECH MAGAZINE

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When the Rankings Get it Right

WSJ Names Florida Tech a National Leader in Student Experience

In the 2024 college rankings from *The Wall Street Journal*, the student experience at Florida Tech ranked No. 6 in the country among the 400 included universities. It is the best showing among all Florida universities on the list and the second-highest ranking for all 196 private schools included in the rankings.

The student experience category is a telling measurement because it is not solely the product of algorithms and hard data. *The Journal* worked with college-focused survey and research company College Pulse to commission one of the largest-ever independent surveys of verified college students and recent alumni in the U.S. More than 60,000 students and recent graduates were surveyed, and the results captured a range of perspectives on student life, including students' perceptions of learning opportunities, career preparation, diversity, dining halls and sports facilities.

The rankings validate what our students have long known.

“

One thing about Florida Tech people need to know is, **be ready for the opportunities** the university throws at you. Every semester since I've been here has been influential. From earning scholarships to learning how to adapt in different classes to learning how to prioritize in fast-paced environments, it is very surprising what you learn and experience.

As a resident assistant and graduate student assistant, I consider everyone here my small family. It has been great getting to work alongside different people who see the world very differently from how I do, as an international student. My time here can be summed up as wonderful.

—Camila Alvarado '22, systems engineering and engineering management graduate student



“



The people are the best thing about Florida Tech. It feels like growing up in a small town but with so many opportunities. It's no secret that the classes do challenge you, but the support you get from everyone just keeps you pushing, and that feeling you get when you are successful in your classes is so fulfilling.

As much as you are challenged, the fun parts balance everything out. Though we are focused on classes, there are so many things that help fulfill the other parts of our lives. And the bonds and connections you make here happen super quick; I made some of my closest friends on the second week here.”

—Nick Santamaria, electrical engineering sophomore

“

I have been at Florida Tech for 2.5 years now, and I have enjoyed every moment of it. I've had the joy of participating in various clubs and organizations, and this past summer [2023], I was given the opportunity to intern with Northrop Grumman.



I personally love the size of the university and the small classes. It has helped me flourish in my field and because of that, it has allowed me to build relationships with professors who have helped me every step of the way to get where I am. The curriculum is rigorous, but I am still able to enjoy a social life and hobbies outside of school.”

—Tia Vagliardo, strategic communications junior

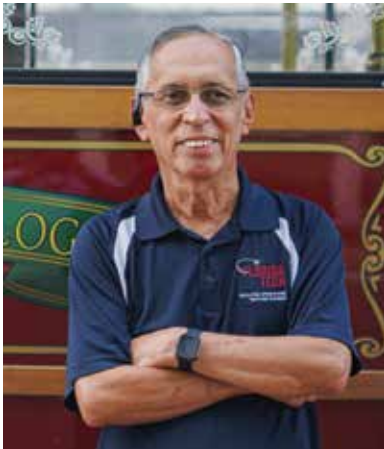
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Sunrise Center

Florida Tech's Sunrise Center opened in January, offering a central destination for student health and wellness services. The remodeled building, formerly known as University Plaza and occupied by retail tenants, is now home to the Holzer Health Center and the Student Counseling Center on the second floor. Named for its architectural accents and wellness focus, the refurbished building helps elevate the campus presence along Babcock Street. Later this year, the first floor will house additional administrative offices.



FAMILIAR FACES:

Oscar Vega

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

“I love to provide excellent service to all my passengers. I feel as though I am a mentor and role model for our students.”

—Oscar Vega

Florida Tech’s driver lead Oscar Vega, or as many know him, Oscar the Trolley Driver, has been with the university for 12 years, making a positive impact on all who cross his path. He continues to be someone students can rely on for support ... and transportation. We spoke with Vega about Florida Tech, his career and what comes next.

How long have you worked at Florida Tech?

In January 2012, I began working for F.I.T. Aviation, then I transitioned to Florida Tech in October of that same year.

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

My role is to transport students, faculty, staff and visitors to where they need to go. I started at Florida Tech when the trolleys first arrived on campus. During that time, I was driving the campus shuttle—which morphed into driving the trolley. I am fondly known as “the trolley driver,” and I now also provide tours for admissions for visiting families.

Working as driver lead, how have you seen the campus and students evolve throughout the years?

Since 2012, I have seen new additions throughout campus. For example, we have a new alumni building, I watched the Bisk College of Business open and I saw Panther Bay being opened as additional housing. Now, we’ll soon have the premed program with Burrell College of Osteopathic Medicine. We have been consistently growing to meet the needs of our students. Having served

through four presidencies, I’ve navigated through both lean and prosperous years. Our diverse student body, representing nations worldwide, attests to our global reach. Some years, we see a predominant Kazakh or Chinese student presence, yet irrespective of the demographic, students choose Florida Tech for its unwavering dedication to providing a high-quality education.

What role does interacting with the campus community play in keeping your job fresh and exciting?

I love to provide excellent service to all my passengers. I feel as though I am a mentor and role model for our students. I understand that navigating our systems can be daunting for some students, and I find great satisfaction in helping them get settled. They can trust me to answer their questions and provide guidance. Establishing strong connections with my students is paramount. Many of them introduce their parents, who express gratitude for the care I provide. To some, I become a father figure. Witnessing their graduation moments is incredibly rewarding. It means a lot when they keep in touch or come visit after graduation.

Student Awarded PKP’s Inaugural Pioneer Award

Shayla Peak has been recognized with the Pioneer Award from the Honor Society of Phi Kappa Phi, the nation’s oldest and most selective collegiate honor society for all academic disciplines. The award encourages and rewards undergraduate members for developing the research, engagement and leadership skills necessary to become a successful scholar. Peak, an aerospace engineering undergrad, is one of 50 students nationwide to receive the \$1,000 award.



Cyberheroines Capture the Flag: Honoring Women in Cybersecurity

In honor of women’s unique accomplishments in cybersecurity, Florida Tech hosted the Cyberheroines Capture the Flag competition in the fall.

The event kicked off virtually Sept. 8 and ran through Sept. 10, giving participants the opportunity to work in person with mentors on the last day in Florida Tech’s Esports Center. Users competed from all over the world, with winners from the U.S., Canada, Slovenia, France, Germany, Singapore and India.

“The participants found this to be a very good capture the flag competition for beginners, and they appreciated our theme of honoring women.”

—Sneha Sudhakaran, FITSEC co-advisor and assistant professor

“The participants found this to be a very good capture the flag competition for beginners, and they appreciated our theme of honoring women,” said FITSEC co-advisor and assistant professor Sneha Sudhakaran, who helped run the event. “We had all our challenges cracked, of which participants found categories like reverse engineering and binary exploitation to be tough at the beginner level.”

All of the challenges from the event were named after successful women in cybersecurity, such as Margaret Hamilton, Dorothy Vaughan and Shannon Kent. Challenges consisted of topics like forensics, cryptography, binary exploitation, reverse engineering and web analysis.

The competition was a collaborative effort by Florida Tech’s Women in CyberSecurity chapter, led by computer science Ph.D. student and FITSEC member **KOURTNEE FERNALD** ’21, ’23 M.S.; FITSEC; the L3Harris Institute for Assured Information; Research Innovations Inc.; Esports; and Tristan Fiedler, the university’s federal government programs manager. It was also funded in part by an Oak Ridge Associated Universities’ (ORAU) innovation award.

During the in-person portion of the competition, Maj. **MEGAN MANLY** ’11, ’14 M.S., stopped by to speak with competitors, motivate them and express the importance of cybersecurity.

Manly is a second-generation Panther and third-generation military officer, who has had a successful career defending the U.S. against cyberthreat actors.

“Maj. Megan Manly motivated us with her hunting experience,” Sudhakaran said. “The discussion motivated high school and university students to pursue careers in this area.”

The competition server is active until next year, so users who want to continue working through the hands-on cybersecurity challenges are able to, with solutions posted on GitHub for assistance.



Megan Manly speaks with competitors during the Cyberheroines CTF event.



Cyberheroines CTF By the Numbers

670
REGISTERED
USERS

393
ACTIVE
PARTICIPANTS

24
CHALLENGES

WINNERS FROM
7
COUNTRIES

5,500
TOP SCORE

Father of Sustainability at Florida Tech, Lindeman Retires After 17 Years

From the waters of Chesapeake Bay to the ocean ecosystems in Oahu, Hawaii, to the coastal estuaries around Jupiter, Florida, wherever **KEN LINDEMAN** '80 was during his early life, his connection to such areas of beauty and complexity grew, as did his interest in the science behind them.



In the ensuing years, additional research and policy needs beckoned, including a growing portfolio of coastal environmental work with organizations such as the South Atlantic and Caribbean fishery management councils and consulting with several nongovernmental organizations, or NGOs. He

also co-founded a small NGO, Coastal Research & Education, where he was executive director until 2000.

Lindeman had another outstanding opportunity in 2000, serving as senior scientist for the Environmental Defense Fund's Caribbean Program.

Now experienced in many aspects of applied conservation science and what these challenges meant to the people affected by them, Lindeman was more aware of the broad scope of sustainability: "It's not only about pandas and rainforests. It's also about making things work better for humans and their economies, as well."

Departing Miami after 20 years, the move presented an opportunity to get to a place that maybe, eventually, would allow Lindeman to slow down a bit. It was with that in mind that he thought, "Maybe we can live near the ocean, and I could get a job at Florida Tech?"

In 2005, the Lindemans moved to Satellite Beach.

Lindeman received Florida Tech's Henry L. and Grace Doherty Visiting Professorship in 2007 and began teaching graduate classes in coastal systems management and marine protected areas.

By 2009, some Florida Tech leaders were considering a potential academic program centered on sustainability.

"Ken had a good background, and he had the ability to interact with a variety of disciplines, both with students and faculty," says Gordon Nelson, professor emeritus and dean of the

—

Ken Lindeman, faculty emeritus, sustainability program



“
It's not only about pandas and rainforests. It's also about making things work better for humans and their economies, as well.”

—
Ken Lindeman,
faculty emeritus,
sustainability program



Lindeman taught his final classes in fall 2023, using his preferred pointer: a segment of a fishing pole.

College of Science when Lindeman was hired. “Sustainability is technology, economics and social welfare. All have to be present.”

Launched in 2010, sustainability quickly became one of the most popular minors at Florida Tech. It attracted students from across the university and across disciplines. In 2014, Lindeman developed a sustainability studies major program, too. By spring 2024, there will be more than 190 graduates of the Bachelor of Science or the minor program.

“Ken Lindeman has been the lifeblood of Florida Tech’s sustainability programs,” says Richard Aronson, professor and head of the department, now called ocean engineering and marine sciences, where Lindeman was based. “His will be large shoes to fill.”

“He leads by example, both in the classroom and in his community,” says ocean engineering and sustainability studies minor alumna **ALICE PENNINGS** ’22, ’23 M.S. “He expected a lot from

his students—as many professors at Florida Tech do—but he always matched and exceeded those efforts in return,” she says.

What truly made an impact on her views on sustainability and the environment was seeing what Lindeman did outside the classroom, such as his work on area boards and with local cities.

“He showed that, to inspire real change, there requires a blend of scientific research, a constant push for policy change, community outreach and volunteer work,” Pennings says. “I had previously seen my purpose in the world of sustainability to be purely scientific. I learned that that is just the tip of the iceberg, and one person can—and should—wear many hats to work toward a more sustainable future.”



This story has been condensed for print. Scan to read the full story on news.fit.edu.

ONES TO WATCH

2 Panthers Named 2023 Astronaut Scholars

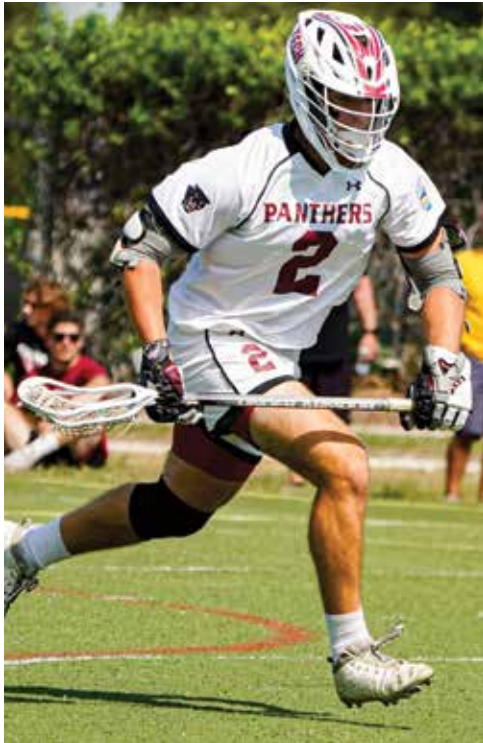
Karly Liebendorfer and Ruth Nichols were named 2023 Astronaut Scholars, the prestigious recognition from the Astronaut Scholarship Foundation (ASF).



A biomedical engineering senior with minors in nanoscience/nanotechnology and chemistry, Liebendorfer is working in associate professor Vipuil Kishore’s Functional Biomaterials and Tissue Engineering Laboratory and was chosen to participate in the yearlong Werner H. Kirsten Student Intern Program at the National Cancer Institute.



A second-time Astronaut Scholar, Nichols is a senior double-majoring in astrobiology and applied mathematics. She is a past recipient of the Outstanding Student of the Year and Distinguished Student Scholar awards.



Quiet Strength

Men's Lacrosse Team Embraces Communication to Support Hearing-Impaired Teammates

By Jerry Durney

Catch any Florida Tech lacrosse game on campus, and the sounds of the game will become quite familiar: pads and helmets making almost constant contact; the whistles of the officials; coaches shouting plays and adjustments to players communicating, in turn, with each other; the roar of the sidelines and stands when the Panthers score.

But Panther men's lacrosse players Drew Haffner and Griffin Martin only hear these sounds in their imaginations.

Haffner suffers from partial hearing loss, while Martin is almost fully deaf.

Martin, a biomedical engineering senior who transferred to Florida Tech from Division I's New Jersey Institute of Technology, found lacrosse after a hit while playing football caused one of his cochlear implants to stop working.

After doctors recommended that he give up football immediately, family members suggested he take up lacrosse. Martin initially bristled at picking up a new sport until he realized it could take him places. He knew he had a chance to become an example for others who could relate to what he was going through.

"It's always been my dream to overcome challenges and obstacles, and I've always had the mindset that I can do anything I put my mind to," Martin

says. "There's not a lot of deaf athletes in sports, let alone lacrosse. So, I also want to be a role model for not just those who have hearing loss, but also for those who have disabilities, to show that it doesn't limit what we do."

Haffner, a freshman from Missouri City, Texas, just outside of Houston, is motivated by his condition.

"I didn't want my disability to be my identity," Haffner says. "I didn't want that to take over like, 'Oh, I'm just a kid with hearing loss.' I didn't want to be at a different school and say, 'Oh, I didn't play lacrosse because of my hearing loss.'"

Given the importance of communication in team sports, Haffner and Martin's teammates and coaches have done whatever they can to make sure the pair is never out of the loop with what's happening on the field.

Together, they came up with different ways to communicate with Haffner and Martin, who join the Panthers in attack as midfielders, about which plays they are running. Sometimes, it might be a hand gesture to mimic an animal that the play is named after; other times, it can be as simple as the pull of a shirt sleeve.

"We expect them to be good kids here and to help their teammates when they can," says assistant coach and offensive



“There’s not a lot of deaf athletes in sports, let alone lacrosse. So, I also want to be a role model for not just those who have hearing loss, but also for those who have disabilities, to show that it doesn’t limit what we do.”

—Griffin Martin,
biomedical engineering senior



“I didn’t want my disability to be my identity. I didn’t want that to take over.”

—Drew Haffner, mechanical engineering freshman

coordinator **ZACH WYNNE** '16. “So yeah, it does bring a smile to our face. It makes us happy to look over and see somebody run Griffin through something or get Drew ready for that next drill and say, ‘Hey, I’ll tap you on the shoulder to go in, since you can’t hear the whistle’—things of that nature.”

“You start thinking outside the box about how to keep the team involved, since Griffin’s getting ready to graduate and Drew’s coming in,” says head coach Brad MacArthur. “We’ve got three more years, and Drew is different from Griffin, but I’m just glad that we have that experience as a staff to know what to do. Because if we have another player come in who needs those accommodations, we’re not going to shy away from that.”

MacArthur, who has prior experience coaching a deaf player, believes it’s the team’s responsibility to make sure Haffner and Martin receive the information and tactics necessary to best help the Panther offense.

“They’ve probably taught us more than we’ve taught or been able to take on our own,” says MacArthur. “Especially Griffin because he’s been able to provide us with some perspective and ideas of how to help get through it during the time we’ve been here. Ninety percent of the communication that we refer to is oral and heard, so we rely on his teammates to help. At practice, we’ll talk to guys and just say, ‘Make sure Griffin knows,’ and they’ll explain it, but he does a bang-up job.”

When Haffner, a mechanical engineering major, made his recruiting trip to Florida Tech, Martin made sure to introduce himself and assure him that he would always have someone in his corner if he made the journey to Melbourne. He told Haffner everything he thought he should know before becoming a part of the program: how the team would be understanding of his condition and that it wouldn’t prevent him from being “one of the guys.”

Martin wanted Haffner to be better prepared from the start than he was.

“I’ve given him advice: Especially on the field, if you don’t understand something, please don’t be afraid to

ask questions,” Martin says. “It doesn’t have to be the coach; it can be an upperclassman. I don’t want him to make the same mistakes I made. One thing I struggled with when I was a freshman was that I was too scared to ask questions because I didn’t want to annoy anyone else, but I think the coaches know what’s best for us, and they are always here to help us.”

For Haffner, it provided further confirmation that Florida Tech was where he should be. He felt that he already belonged, that the team understood what he was going through and that they would do everything they could to make him feel at home.

“It made me more reassured that they’re accepting,” Haffner says. “Because they know how it is; they already know, and they make accommodations for it. They don’t blow it off and say, ‘Oh, this isn’t that important, it’s not really a bad thing.’ They made me feel accepted.”

Both players have also learned ways to make their situations easier in the classroom, e.g., sitting in the front of the class in case they need a professor to repeat something they didn’t catch the first time.

Martin says that lacrosse has helped emphasize the importance of communication in other facets of life.

“Whenever I graduate and get a job, I’m going to have to learn how to talk to my boss and my co-workers,” Martin says. “Developing that relationship with the people that I’m going to be working with every day is vital because if you don’t know how to work together, then not much is going to be done.”

Haffner believes the combination of playing lacrosse and his condition has taught him the value of perseverance and gratitude.

“When I was younger, I was really upset, like, ‘Why did I have this? Why am I the only one?’ Because growing up, I never saw anybody with my type of hearing loss,” Haffner says. “It has made me stronger as a person and more grateful for what I have because some people have no hearing. I have this; I should be thankful I have this.”

When the coaching staff members were asked about their one-on-one experiences with Haffner and Martin, they were all eager to rave about them as people as much as players.

“They’re funny guys; they’ve got good personalities,” Wynne says. “Griffin has a great sense of humor, and it allows him to deal with things a lot easier. Drew’s the same way. He’s got the biggest smile on, and he comes in dang near every day to get an extra lift in. Figuring out what interests them and seeing them excel in what they’re doing in the classroom and on the field is fun to experience.”

Chris Hawley, the team’s defensive coordinator, agrees that being around the duo on and off the field has not only helped make him a better coach but has provided him with perspective, as well.

“Griffin’s such a happy kid; it’s just a blast to work with him,” Hawley says. “He’s just such a happy kid; he’s a goof. Drew’s the same way. He might be the goofiest, smiliest and most hardworking kid that I’ve ever met.”

RICHARD GRIFFITH

Learning by Doing: Experiential Learning as an Accelerator to Effectiveness

I write this while traveling from a small Austrian city to Vienna.

My career at Florida Tech sends me abroad about two to three months a year, developing relationships, strengthening our networks and learning about culture.

Couldn't I just learn about culture from a book? The short answer is no.

Learning any complex interpersonal skill from formal learning approaches (classroom lectures, books, etc.) is like trying to learn to ride a bike from listening to a podcast. It simply can't be done.

The key to learning these complex skills, such as cross-cultural competence, is to learn by doing: experiential learning.

At Florida Tech's Institute for Culture, Collaboration and Management (ICCM), we focus on this experiential learning, which suggests that individuals prepare and reflect on learning events to maximize their learning.

This has resulted in several articles, chapters and, most recently, a three-year, \$1 million contract with the U.S. Army. But the most important metric for us is that this approach has made ours one of the fastest learning programs on campus.

Most people would agree that learning by doing is a superior learning approach (as compared to the classroom). However, most people are too busy "doing" to do much learning.

Our approach, called "guided mindfulness," eases the time pressure and cognitive overload associated with

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Our approach, called 'guided mindfulness,' eases the time pressure and cognitive overload associated with learning in the real world.

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Richard Griffith
*Industrial and Organizational
Psychology Professor
and Executive Director of
the Institute for Culture,
Collaboration and
Management*

learning in the real world. The technique automates the probing questions that we all should be asking and captures the data in a way that can be sorted, reviewed, etc.

Often, organizational leaders are overwhelmed by stray thoughts and focus on the concrete elements of business. In my experience, this is a huge mistake that can slow learning progress.

It is important to find a few minutes after a potential learning event to reexamine performance in the moment and evaluate next steps. This changes the way we think and allows us to learn more deeply and efficiently.

Why do we study this learning approach at the ICCM? Because the world needs to learn faster to solve the huge challenges we face, e.g., global pandemic, climate change and much more.

Learning is the currency of the 21st century, and the speed of learning is a critical factor in achieving success. Data suggests it takes 10 years to develop a global leader, and frankly, we are running out of time.

We face challenges that threaten our survival. To meet these challenges, we need the best and brightest scientists and practitioners, and we need them now.

I hope that the ICCM can scale this solution and offer it to organizations worldwide. Ultimately, accelerating learning will allow us to survive and thrive in the coming century.



RICHARD GRIFFITH

is an industrial and organizational psychology professor and executive director of the Institute for Culture, Collaboration and Management. His current research focuses on the development and validation of cross-cultural competence measures, and he is conducting research and development on “guided mindfulness,” a technological solution to optimize experiential learning.

Nature Serves as Inspiration for Manufacturing Research

Funded by the National Science Foundation’s Highly Competitive CMMI-Mechanics of Materials and Structures Program

Inspired by the tiny, circular vessels in the trunks of palm trees that allow the iconic plants to bend but not snap in strong winds, an assistant professor of aerospace engineering is researching how to recreate Mother Nature’s handiwork in additive manufacturing.

Mirmilad Mirsayar received a three-year, \$200,627 research grant from the National Science Foundation’s highly competitive CMMI-Mechanics of Materials and Structures program to study the mechanics and physics of crack propagation in functionally graded cellular structures

in Florida’s windy environment. Other biological systems, such as bone, honeycombs and marine sponges, also serve as natural inspirations.

“I’m enjoying this research because I’m learning from nature, and I’m applying fundamentals of physics and mathematics to solve a very important engineering problem while training the next generation of engineers and researchers,” he said.

Materials with cellular structures, such as aircraft wings and artificial bones, are widely used in industries such as aerospace and biomedical. As additive manufacturing



I’m enjoying this research because I’m learning from nature, and I’m applying fundamentals of physics and mathematics to solve a very important engineering problem while training the next generation of engineers and researchers.”

—Mirmilad Mirsayar

made by additive manufacturing. That’s the process of creating an object by building it one layer at a time.

Mirsayar is the sole principal investigator of the project, “Understanding Mixed-Mode Fracture Mechanics in Additively Manufacturable Functionally Graded Microcellular Solids.”

His research is inspired by cellular patterns seen in palm trees and butterfly wings. For example, unlike oak trees and some others, the palm tree’s center contains those vessels, distributed nonuniformly throughout the trunk, that help it survive

has advanced, materials with cellular structures and increasingly complex geometrical patterns can be precisely manufactured.

Mirsayar is looking at ways to optimize these strong and light cellular structures made by additive manufacturing to achieve the highest resistance against failure under complex operational loading conditions, such as bending tension, compression and torsion.

Cellular Patterns

Mirsayar’s research is inspired by cellular patterns—tiny, circular vessels distributed nonuniformly, allowing them to bend but not snap—in natural biological systems, such as:



Palm trees



Butterfly Wings



Bone



Honeycombs



Marine sponges

Nomadic Planets and the Interstellar Zoo

Researchers previously thought the space between the stars was empty. In fact, the opposite turns out to be true—it is populated with debris of all sizes, including planet-sized nomadic worlds that might host life. Research from a Florida Tech astrobiologist examines this broad class of objects that are not gravitationally bound to any stars.

In a research paper highlighted in the highly rated astronautics journal *Acta Astronautica*, Manasvi Lingam, along with researchers from the University of Luxembourg and Space Initiative Inc., studied the movement of nomadic planets through our solar system. They concluded that there may be hundreds of planets in the interstellar space between the solar system and the nearest star.

“If you draw a line connecting the solar system and the nearest planetary system (associated with the star Proxima Centauri), and then you construct a bubble enclosing these two planetary systems, then you can study what are the number of these nomadic worlds that could exist in this bubble, and the answer seems to be that there are hundreds of them that are just whizzing by through interstellar space, and they’re not yet detected,” Lingam said. “Based on our best estimates coupled to the available data, our models indicate that there are hundreds of these planets moving through space.”

Over the last five years, researchers unrelated to this work have detected two small objects passing through the solar system, Oumuamua and Borisov. These interstellar

objects were very small (roughly about one-tenth of a mile). By using this astronomical data, the team was able to estimate what the number of these nomadic planets would be.

The data was combined with the data from astronomical observations through a technique known as gravitational microlensing, which is a way of detecting distant planets through Einstein’s theory of relativity. Using these different sources of data, Lingam and collaborators were able to figure out there might be hundreds of these planets inhabiting the interstellar space between the sun and the nearest star.

“This method has been used to study planets around other stars, as well. We constructed a whole spectrum of these nomadic worlds

for our models, ranging from small ones, which are about 100 miles in size, to ones larger than the Earth,” Lingam said. “In other words, there is a whole spectrum of these worlds traversing interstellar space.”

These planets are traveling from long distances, some perhaps originating from hundreds or thousands of light-years away, and visiting our galactic neighborhood. Observers can survey them via appropriate scientific instruments (e.g., cameras, spectrometers).

As these planets travel across our solar system, researchers can obtain valuable clues about their histories, what types of surfaces they possess, whether they might host life and much more.

Examining the Nuances of Narrative Communication

A new book co-edited by School of Arts and Communication professor Heidi Hatfield Edwards looks at how narratives are used and how effective they are across political, corporate and other areas of communication.

The book, *Narratives in Public Communication*, is a collection of communications research material edited by Hatfield Edwards and Fuyuan Shen, Penn State’s Donald P. Bellisario Professor of Advertising. Penn State’s Arthur W. Page Center for Integrity in Public Communication funded the research featured in the book.

“
We are all
storytellers.
How we tell
those stories
makes a
difference.”

—
Heidi Hatfield Edwards

The book is a culmination of studies conducted that examine political, health and science communication, as well as advertising and public relations.

“The research in this book covers a wide range of topics important to the public and uses diverse methods that broaden our understanding,” Edwards said. “We have highly quantitative studies, and we have qualitative studies. It’s a nice range and mix of inquiry and analysis that get to the nuances of narrative communication. We are all storytellers. How we tell those stories makes a difference.”

What’s Inside

Narratives in Public Communication features nine studies on a range of topics, including:

- » How corporations communicate their sustainability efforts through advertising
- » Anti-vaccine misinformation corrections and how narratives are used to make those corrections
- » Literature created for women participating in a leadership development program and how the stories embedded in the materials impacted their involvement and their sense of identity with the program
- » Different types of stories told through the #MeToo movement

Prime is a quantity.

Unique, a product unachievable by any two other numbers. 2, 5, 7 ...

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* HARMONY

In music, “harmony” is a combination of notes that produce chords with “a pleasing effect.” Harmony is not hitting the exact same note. Rather, it is hitting multiple, distinctive notes that, when heard together, fuse to form a more complex and cohesive sound. Harmony is agreement, coherence, balance achieved through collaboration. And while in music, melody may take the foreground, it is harmony—a kind of note partnership—that enriches and elevates a song.

Florida Tech is a song, and harmony is our forte. Here are a few prime examples.

7

COMMUNITY COLLABORATIONS

1 Books for Kids

Assistant professor **KELLI HUNSUCKER** '07 M.S., '13 Ph.D., and Ph.D. students **CIERRA BRAGA** '15, '18 M.S., and **KAILEY RICHARD** '20 M.S. teamed up to publish and distribute to Brevard schools two environment-themed children’s books designed to resonate specifically with the Space Coast community. *A Day Offshore Fishing* and *Earth’s Blanket of Air* are the result of a literacy grant from the Honor Society of Phi Kappa Phi.



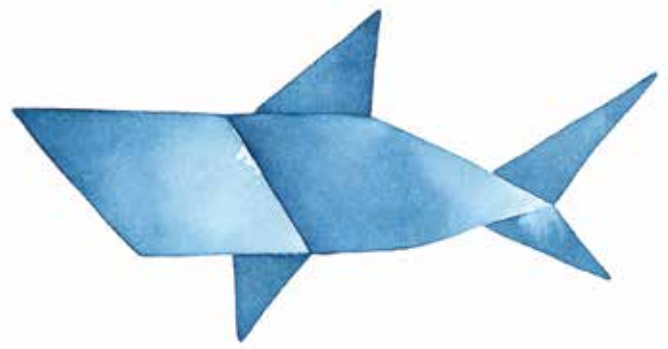
2 Peace Corps Partnership

Florida Tech has renewed its more than 20-year partnership with the Peace Corps’ Paul D. Coverdell Fellows program, a graduate school program through which universities across the country offer some level of financial support to returned Peace Corps volunteers who, in turn, complete substantive internships related to their program of study in underserved U.S. communities.

3 Instant Mental Health Support

To its host of existing mental health programs, Florida Tech has added TalkCampus, an app that connects students with trained peer supporters from around the world to provide a safe, anonymous place to talk about the ups and downs of life before problems escalate. TalkCampus combines peer support with state-of-the-art machine learning built in collaboration with MIT and Harvard.

2 RESEARCHERS SEEKING 'BALANCE'



Wang and researchers at the University of South Florida co-authored a paper, published in *Gut*, examining intestinal permeability, or leaky gut syndrome, a theoretical condition where the intestines leak water and nutrients. This can lead to inflammation and changes in the normal gut bacteria, which in turn, could cause problems within the digestive tract. By examining the metabolites of mice, they found that the microbiota of both obese humans and mice reduced ethanolamine-metabolizing capacity in the gut, which can instigate leaky gut syndrome. A possible solution? Restoring the ethanolamine-metabolizing function of gut microbiota using human-origin probiotic therapy.

Gut Balance: **BO WANG** Chemical Engineering Assistant Professor

“ Basically, they feed the mouse those kind of good bacteria, and then try to balance the microbiome status inside the mouse, and try to see if we can overcome some gut leakage and reduce diabetes and obesity.”

—Bo Wang

Ecosystem Balance: **SHANNON BARRY** Biological Sciences Ph.D. Student

Barry, a student in Florida Tech's Shark Conservation Lab, received a \$5,000 Guy Harvey Scholarship for her research focusing on the genetic diversity of bull sharks migrating poleward in response to climate change. Barry and research collaborators have collected and extracted DNA samples from more than 1,000 bull sharks throughout the Gulf of Mexico, the Caribbean and the northwestern Atlantic Ocean.

The Guy Harvey Foundation provides such scholarships to inspire and fund research opportunities that will ensure a properly balanced ocean ecosystem for years to come.

“ These genetic data can then be used to predictively model how climate change may impact future habitat use of bull sharks.”

—Shannon Barry

4 Big Day of Service

Florida Tech's annual Big Day of Service brought together 168 participants, including various academic departments and numerous student organizations, to package roughly 8,000 hygiene kits in partnership with United Way of Brevard.

5 A Day in the Life of the IRL

Students and faculty, joined by more than 30 primary schools and 28 environmental organizations, participated in the Ocean Research and Conservation Association's sixth annual A Day in the Life of the Indian River Lagoon event Oct. 5. Florida Tech teamed up with Central Middle School to examine oyster mats at Ryckman Park in Melbourne Beach, part of the university's Living Docks program.

6 IMPACT Grants

At the 11th annual IMPACT Summit in October, weVENTURE Women's Business Center presented its inaugural IMPACT Grants, which provided direct funding to three women-owned businesses on the Space Coast:

- The Seaside Succulent, Leslie Thomas, \$15,000
- Chef's Kitchen South, Lacy Bussey, \$10,000
- Vitaglide, Marcy Ullom, \$5,000

7 Treat or Treat

Florida Tech welcomed about 1,800 community members to Treat or Treat 2023, the popular Halloween event hosted by Student Life and Residence Life on the Residence Hall Quad. Five residence halls were converted into themed haunted houses of varying spookiness. The event also featured a trick-or-treating area, costume contests, inflatables, games and a crafting center.

5

UNIQUE MUSICAL PERFORMANCES

1

CONCERT CHOIR

visits and performs for Buena Vida Assisted Living residents each semester.

2

WIND ENSEMBLE

performed a concert score of video game music, showing the game on the screen behind them.

3

BIG BAND

was invited to perform at the 2024 New Jersey Music Educators Conference and performed jazz standards during the 37 Hours of Giving event in November 2023.

4

A CAPPELLA CHOIR

has performed pop music for prospective students at Discovery Day.

5

PEP BAND


performs in the annual Downtown Melbourne St. Patrick's Day Parade—not to mention Panther basketball home games!



HOW WE'LL **WEATHER** WHAT'S NEXT

Florida Tech faculty and alumni tackle the challenges of extreme weather to create a world that is safer and better for everyone.

By Erin Peterson



A world with increasingly extreme weather can feel ominous. The storms are bigger. The wildfires are more devastating. The heat waves are longer and fiercer.

While these challenges loom, Florida Tech faculty and alumni experts also see something even more powerful on the horizon: opportunity.

“This is a chance to rethink everything,” says Lori Cary-Kothera '96 M.S, director of climate adaptation and

resilience at the White House Council for Environmental Quality. “We don’t just have to learn from our past; we can lead new, innovative efforts and show the world what can be done.”

Across the board, Florida Tech experts are doing just that. They’re fueling change through innovative research and practical, on-the-ground solutions that fortify our coasts, clean our air, strengthen our homes and buildings and help us rebuild resiliently.

**READ ON TO SEE EIGHT WAYS
FLORIDA TECH ALUMNI AND
EXPERTS ARE ADDRESSING THE
IMPACT OF EXTREME WEATHER.**

continued on page 20

1 We're taking effective action to maintain our coasts.



Robert Weaver is an associate professor of ocean engineering.

Robert Weaver knows the numbers can be eye-popping: In late 2023, nearly \$50 million in federal funding went to replace sand on Brevard County beaches in the wake of 2022's Hurricane Ian.

"People want to know if there's value in sand that's just going to wash away," he says. "It can be a tough sell."

But for Weaver, who studies coastal eco-engineering, hydrodynamics and storm surge inundation, the need is clear. Hurricane waves and storm surges, paired with slowly rising sea levels that amplify these extreme weather effects, cause significant erosion. Left unchecked, they can damage or destroy nearby property and infrastructure.

"Healthy, wide beaches are an important part of having a resilient coastline," he says.

While the impacts of climate change and extreme weather have grown sharper in recent years, and the cost of trucking in

beach-quality sand has increased, Weaver says that the current process of maintaining beaches in the face of erosion is effective. He is optimistic it will continue to be so for the foreseeable future.

"In Florida, we've been able to hold off sea-level rise, in the sense that our shoreline position has been held, and waves aren't attacking further up the beaches in the dunes," he says.

While large-scale ocean circulation patterns could throw a wrench into predictions going forward, Weaver says continued ingenuity and funding will allow Florida—and other coastal areas—to continue to thrive.

"We might not be able to stop water levels from rising, but when we know what's going to happen, we're able to develop plans to manage the outcome," he says.

2 We're using the federal government's vast scale to create sustainable change.

Lori Cary-Kothera '96 M.S. is director of climate adaptation and resilience at the White House Council for Environmental Quality.

In our nation's effort to mitigate the impact of climate change and extreme weather, **LORI CARY-KOTHERA** knows that the federal government brings a not-so-secret weapon to the fight: its vast size and resources.

"The federal government is the largest procurement spender and the largest landowner with the largest number of buildings," she says. "That presents an opportunity to lead and to show what can be done around building national resilience."

Alongside another Florida Tech alumnus, **FORBES TOMPKINS** '10 M.S., Cary-Kothera works with federal agencies to develop their Federal Climate Adaptation Plans (CAPs) and leads a group of federal agency leaders, called the Federal Climate Adaptation Plan Network, who implement these plans. With the support of actionable data about the hazards facing federal buildings and employees, they've worked to map out the ways that they can use these resources to make

a measurable impact in building climate resilience.

For example, these teams have worked together to support general climate literacy among employees. They've also created training to help leaders make climate-informed decisions for big purchases. If a vendor is located in the hurricane-prone Gulf of Mexico, agencies might opt to have backup plans if extreme weather shuts down a plant. They've taken a close look at ways to pair national approaches with local action, recognizing that every community has different needs.

"The threat of extreme weather events fueled by climate change is a moment to rethink how we do business, how we run our government safely and effectively for the long term and how we incorporate resilience into our personal lives," she says. "This is a huge opportunity and a chance to think about the future we want to build for this country."



"The threat of extreme weather events fueled by climate change is a **moment to rethink** how we do business, how we run our government ... and how we incorporate resilience into our personal lives."

3 We're bridging cutting-edge science with effective communication.



Da'Vel Johnson '14, '15 M.S., is a meteorologist for the National Weather Service and a liaison to the Federal Emergency Management Agency's (FEMA) National Incident Management Assistance Team.

In his decade of work for the National Weather Service, **DA'VEL JOHNSON** has been through his share of extreme weather events, which he ticks off one by one: hurricanes Matthew, Harvey, Irma and Maria; California's drought-fueled Camp Fire in 2018; and catastrophic heat waves throughout the country.

"I can go on and on," he says.

In his role, Johnson gives weather briefings, supports on-the-ground strategy before the weather hits and helps map out recovery efforts in areas affected by extreme weather.

Forecasting and weather modeling have improved by leaps and bounds since he started in his role, but Johnson says he's particularly excited about the inflection point we're at right now: not just correctly forecasting what's next, but sharing that information in clear and timely ways that

lead individuals and organizations to take the right actions.

These improvements include leveraging social media and machine learning. In the past, for example, the Weather Service tended to use technical, scientific language in its communications to the broader public.

"Now, we do direct feedback through Facebook and other services," says Johnson. "You can talk to the Weather Service in ways that weren't available before."

The Weather Service is also using machine learning and AI to translate its messages into languages including Spanish, Mandarin and Vietnamese, a process that makes getting emergency information easier and more equitable.

"Is it perfect? No. It's difficult and takes a lot of time," says Johnson. "But the trend is in the right direction."



Our current inflection point:

not just correctly forecasting what's next, but sharing that information in clear and timely ways that lead individuals and organizations to take the right actions.

4 We're helping people breathe cleaner air.

Melissa Sheffer '06, '08 M.S., is a meteorologist with the Environmental Protection Agency (EPA).

In her work modeling air dispersion, **MELISSA SHEFFER** looks at major sources of industrial pollutants—power plants, smelters, mines and the like—and pairs the dangerous emissions of those sites with meteorological data to determine their impact on air quality levels.

Her work has important intersections with extreme weather.

"We're seeing a lot more events in which stagnant air sits over the country, which means we'll have reduced mixing in the atmosphere for pollutants," she says.

"Plus, the increased heat and sunlight that typically accompanies these stagnant air masses can cause a secondary formation

of pollutants, like high concentrations of ozone."

While this one-two punch of factors is an unwelcome development, Sheffer also says there is significant reason for hope. Today's sophisticated modeling tools can work in tandem with tighter regulations to minimize the impact of air quality issues. A recently proposed rule to lower what qualifies as acceptable levels of particulate matter in ambient air could further support better air quality.

"All of that helps communities breathe better air, even as we continue to have extreme weather events," she says.



continued on page 22



5 We're using technology to help pilots safely avoid extreme weather.



Michael Splitt is an assistant professor of meteorology.

Buckle up, frequent fliers: Extreme weather in a climate-changed world might make our plane trips a whole lot bumpier, says Michael Splitt.

Changing jet stream patterns could cause more high-altitude turbulence for transatlantic flights. That could lead to new, longer routes to avoid the jostling—as well as higher fuel costs and ticket prices. On the ground, record rainfall and thunderstorms may lead to dangerous lightning and standing water that shuts down ground operations.

Splitt and his graduate research students are looking at ways to help pilots navigate this new world with tools to identify dangerous cloud types, like the towering cumulus.

“Weather observations have typically been very human-oriented, but that human

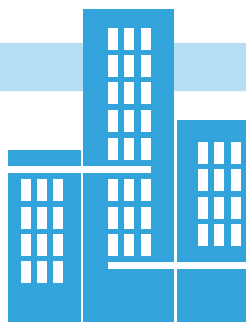
support can be more difficult to find for smaller airports,” he says. “Cameras with AI capability could give an early alert in data-poor areas.”

That extra data—if communicated effectively to pilots who might be affected by it—can lighten the workload required at smaller airports, provide critical information to pilots whose flights might be affected by the information and help avoid the risky situations that may be more common in the future.

“I wish we could get the greenhouse gasses under control,” he says. “But even if we don’t, I am hopeful that the research activities we’re doing now will help us deal with some of the effects.”



6 We're rebuilding better.



Yunziyi (Lisa) Lang '14 is a climate change specialist for the World Bank's South Asia region.

In fall 2023, **LISA LANG** was in Sindh, Pakistan, following devastating 2022 floods in the southern part of the country that washed away millions of homes. She is part of a World Bank-financed project that supports the owner-driven reconstruction of these homes. The project also focuses on promoting multihazard resilient reconstruction standards and women’s empowerment through community mobilization and financial inclusion.

Lang says efforts to foster climate and disaster resilience happen at multiple levels: It requires including risk considerations in development planning and policymaking, strengthening institutional capacity for risk monitoring and prediction, and integrating adaptation and mitigation interventions into the design of each development program.

“It is crucial that we don’t just respond to the disasters but think through the preventative measures that can reduce the impact of these events in the future,” she says.

Lang says that despite the challenges, she is heartened that development practitioners are increasingly knowledgeable and thoughtful about the intersections between climate change and their work.

“They recognize that failing to integrate climate considerations into global development efforts could jeopardize the effective use of valuable resources,” she says. “While there remains a need for further advancement in practical expertise, a positive shift in mindset has taken place.”



“It is crucial that we don’t just respond to the disasters but think through the **preventative measures** that can reduce the impact of these events in the future.”

7 We're finding effective ways to balance extreme weather's economic impact.

Jean-Paul Pinelli is a professor of engineering and director of the Wind and Hurricane Impact Research Laboratory (WHIRL).

Major storms and hurricanes have proven to be increasingly expensive for Florida residents and businesses. They're also economically challenging for insurance companies covering the structures damaged by these events—as well as the state itself. But how might we make changes that leave everyone in this equation better off?

That's a question that Jean-Paul Pinelli and his team at Florida Tech's WHIRL help address. He and his team of engineers, scientists and business experts do catastrophic risk modeling to understand how to keep more people and property safe while providing guidance to help insurance companies and the state set appropriate premiums.

It's a delicate dance. While most Florida homeowners would benefit from putting shutters on their windows—an expense of a few thousand dollars that can prevent the total loss of a home—not all protective measures are cost-effective.

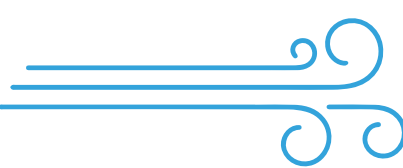
"We could eliminate losses if we built every house like a bunker, but that's not realistic," Pinelli says.

Insurers, meanwhile, must set premiums in ways that reward homeowners who take the right steps to protect their homes and that also ensure that companies have funding to pay out for catastrophic losses.

The state, which regulates the insurance industry (and is also a participant in it), can offer tax incentives to support specific preventative measures, as well. To come up with fair solutions, Pinelli and his team do on-the-ground measurements with sensors during extreme weather events and post-event reconnaissance to build accurate models, then pair those with sophisticated stochastic analyses that can run more than 50,000 "hypothetical hurricanes" to come up with damage estimates. These, in turn, translate into annual expected losses for insurance companies.

"It's a complex interaction among different actors, but we want to help create win-win situations for everyone: protecting the homes so that they have less damage, which leads to fewer claims to pay out for insurance and the government, and a community that is safe and resilient," Pinelli says. "That's the ultimate objective."

"We could eliminate losses if we built every house like a bunker, but that's not realistic."



8 We're helping more people understand wind's impact—and develop solutions.

Steven Lazarus is a professor of meteorology.

Wind velocity is typically measured at a height of 10 meters. But that doesn't represent the complex reality of its movements as it gets closer to the ground, ebbing and flowing around buildings and accelerating through spaces.

"Wind that happens at roof height can be very local—a row of trees in your yard could mean that you'll have a different experience with the wind than your next-door neighbor," says Steven Lazarus, whose research includes the impact of high-wind events on residential structures.

New tools offer more robust insight. For example, using light detection and ranging (lidar), Lazarus and his students are pairing information about wind profiles—wind measured at multiple heights—with Microsoft-developed AI software for building geometry.

"You can import shapes and dimensions of buildings into fluid models and get a sense of how much wind they're blocking," he says.

It's work that can help highlight areas that are particularly vulnerable to wind damage—and create engineering projects to mitigate that risk.

The tools open the field to a broader range of experts in cross-disciplinary research areas. Once the tools have been developed, with the supporting software, which integrates the enormous amount of available data, it can be adapted for any area—not just specific regions in Florida.

"It means we can take what we're doing here and apply it somewhere else," he says. "These new platforms can deliver science not just to other scientists, but to the community as a whole. And that can offer us a better way forward—planning for the next disaster."



THE
**BIG,
FUN**

FLORIDA TECH
ALUMNI
SURVEY

In November, nearly 800 of you participated in the first Big, Fun Florida Tech Alumni Survey, the friendliest, quirkiest and most entertaining way to reconnect with your alma mater—and the results are in!

While most respondents earned a bachelor's degree from Florida Tech (59%), ages spanned the gamut, ranging from 21 to 88—on paper, anyway.

If you're a Type C Thinker¹ itching for details—Where are my Midday Macaws at? What's the consensus on top campus landmark? IS a taco a sandwich²—pause your podcast², grab a Coke³ and a slice of New York-style pizza⁴ and **enjoy this highlight reel of responses.**

¹which is most (29%) of you, excluding the Type X Hybrids (36%)

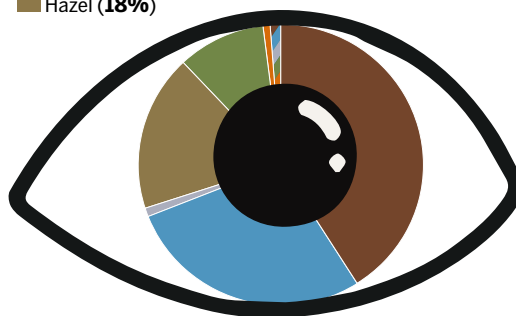
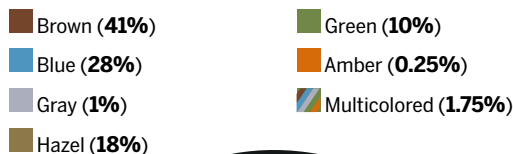
²preferred 62% over audiobooks

³preferred 79% to Pepsi

⁴preferred 78% over Chicago style

SOME DEMOGRAPHICS

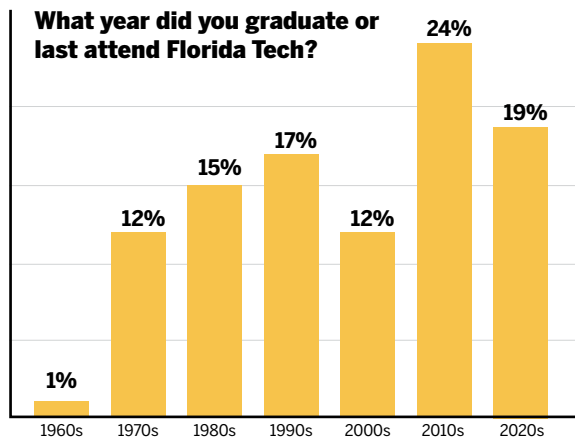
What color are your eyes?



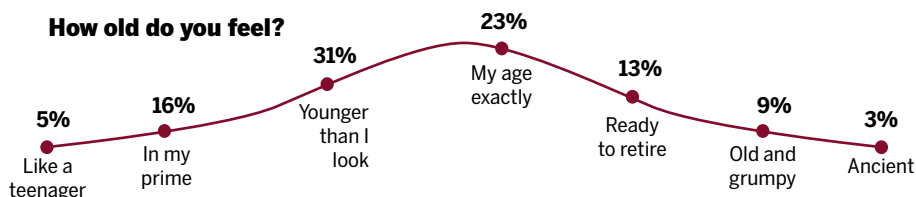
What Florida Tech degrees have you obtained?



What year did you graduate or last attend Florida Tech?



How old do you feel?

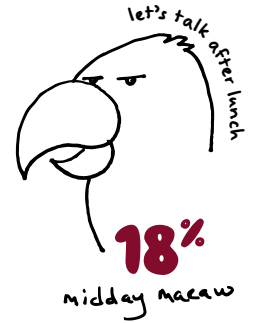
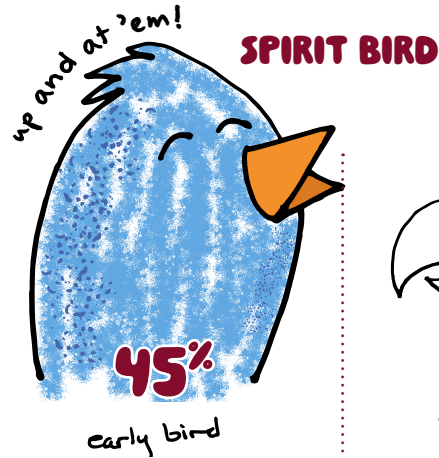


PERSONALITY HIGHLIGHTS

When it comes to personality type, most of you (61%) have no idea what your Myers-Briggs type indicator is.

Among those who do, however, nearly 10% identify as **INTJ, or the “architect”** personality type, known for being introverted, strategic, analytical and independent, possessing a love of knowledge as well as deft problem-solving abilities. (*Sound like you or anyone you know?*)

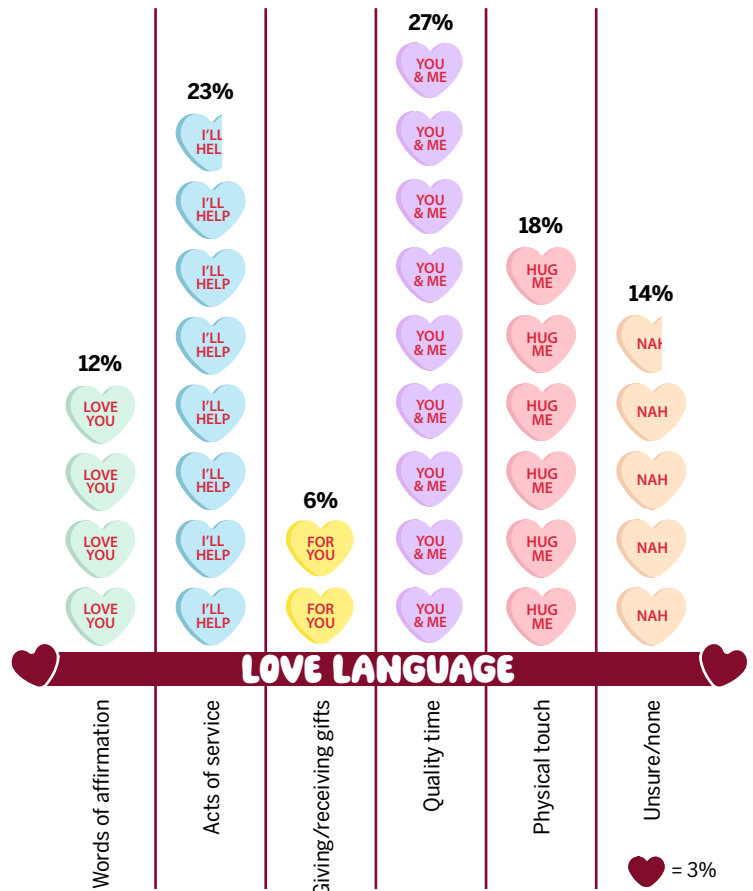
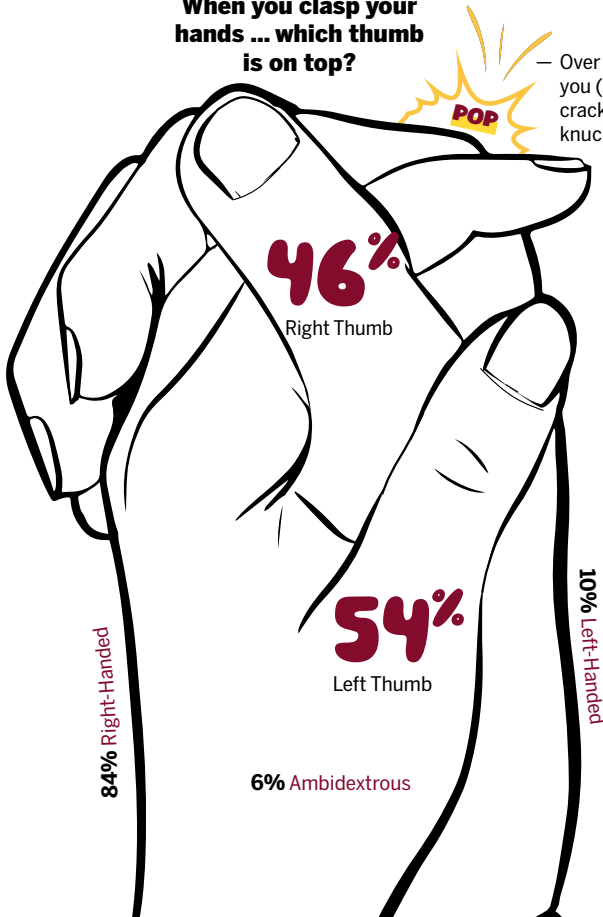
Interestingly, INTJs are considered quite rare, making up only around 2% of the U.S. population. Just another thing that makes Florida Tech so special!



HANDY DATA

When you clasp your hands ... which thumb is on top?

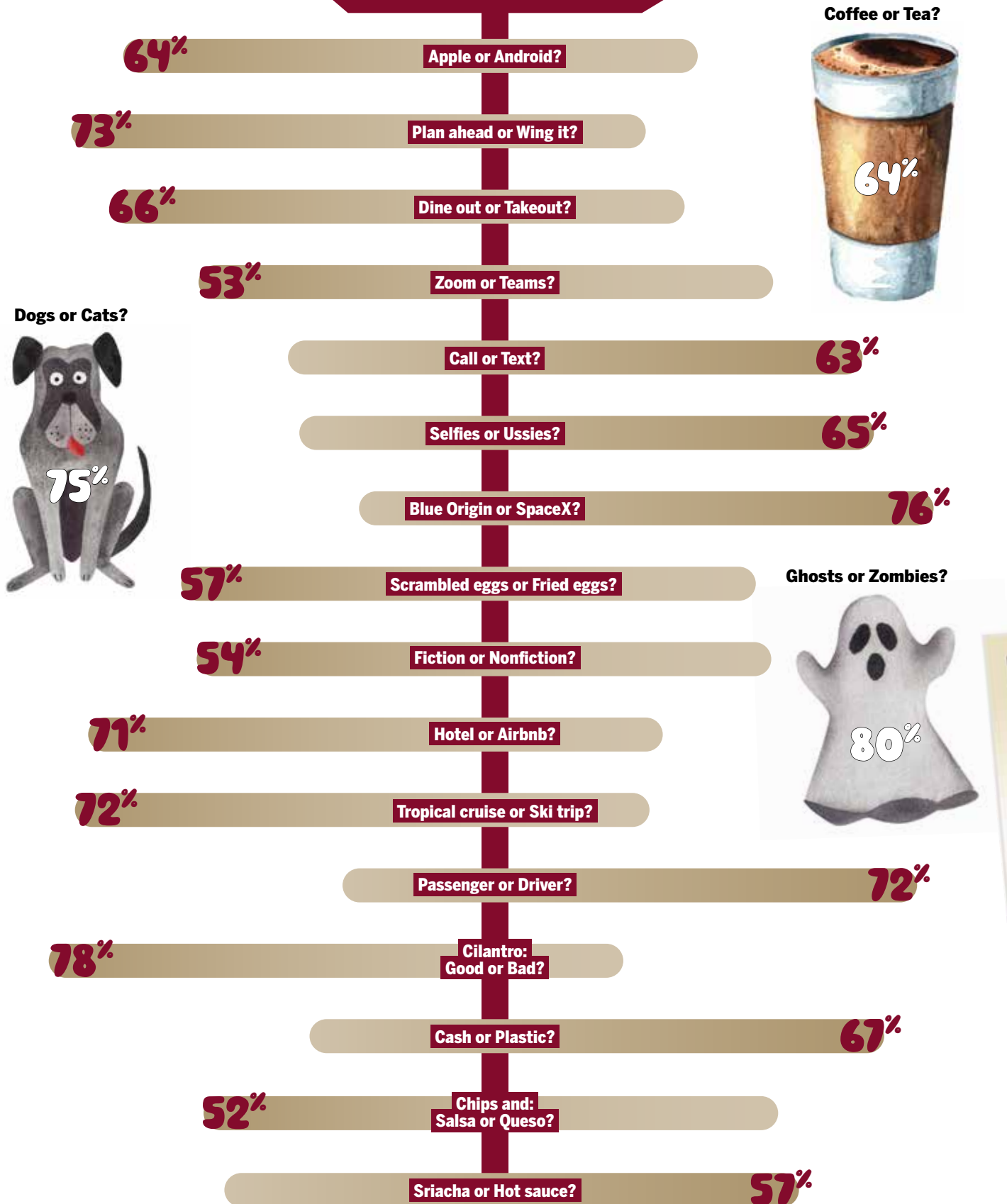
— Over half of you (54%) crack your knuckles.



continued on page 26

Sometimes, there's no better way to get to know someone than a good old-fashioned "This or That" exercise. We were hoping for a mix of surprising, validating, funny and random responses—and you delivered.

THIS OR THAT?



CAMPUS NOSTALGIA

A lot has changed in our 65 years, but perhaps most remarkable are the things that have remained the same.

What's one word you'd use to describe Florida Tech **when you were enrolled**?

What's one word you'd use to describe Florida Tech **today**?

Great Panthers think alike! Of the hundreds of varied answers to these questions, many of you chose the same adjectives to describe your alma mater. And five words were repeated between **both lists**!



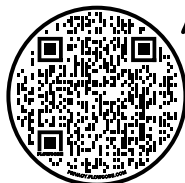
“My gosh, it might actually really be the M.I.T. of the South now!”

Yes, it's more than one word, but we had to share this comment!



LORE

A good number of you are familiar with the “atomic toilet” story (22%), followed closely by our Squamish heritage (19%), but that’s about where your campus lore knowledge ends. Let’s fix that!



Scan here to read all about our university's quirky-yet-inspiring history.

Streiking? Quail farming? Leprous armadillos? We can't make this stuff up!

Photos courtesy of the Harry P. Weber University Archives



Most iconic campus landmark

We asked you to rank eight campus landmarks, with No. 1 being the most quintessential and iconic element of campus. Most-picked (41%) for No. 1: Crawford Tower!

continued on page 28

SOME OTHER THINGS



4.35%

of you think a taco is a sandwich.

No. Just, no.



Is pineapple an acceptable pizza topping?

38%

of you say no, which makes 62% of you wrong.

Just kidding—anything can be an acceptable pizza topping if it makes you happy!



Do 89% of you know something we don't?

WOULD YOU RATHER?

87%

Grow in height by one foot

13%
Shrink in height by one foot

29%

Be trained as a pirate

71%

Be trained as a ninja

70%

Be able to fix anything mechanical

30%
Control electronic devices with your mind

18%

Have a chauffeur

82%

Have a personal chef

57%

Become a rock star

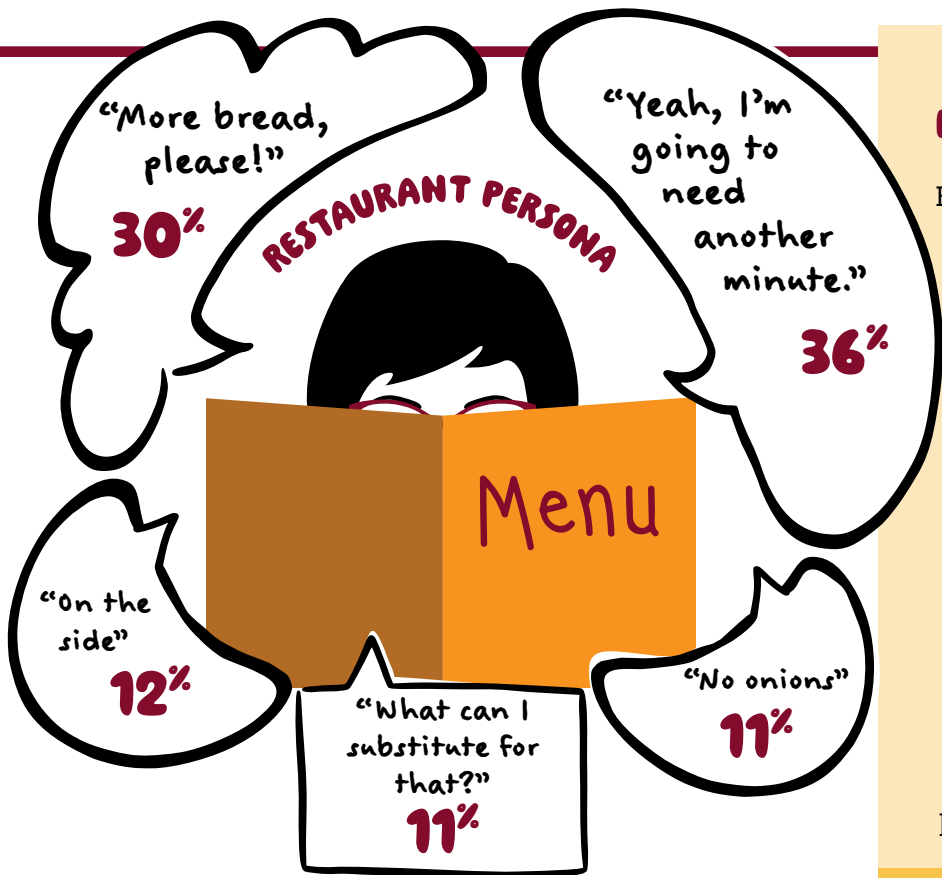
43%
Be the first human on Mars

23%

Swap personalities with a DC character

77%

Swap personalities with a Marvel character



IN CONCLUSION

For those of you who...

Would rather be completing a difficult but satisfying video game (5%)

Have a Type B “Socializer” personality (8%)

Consider a Pop-Tart a sandwich (1%)

Can’t roll your tongue (30%)

And consider “musical” your strongest intelligence (2%)

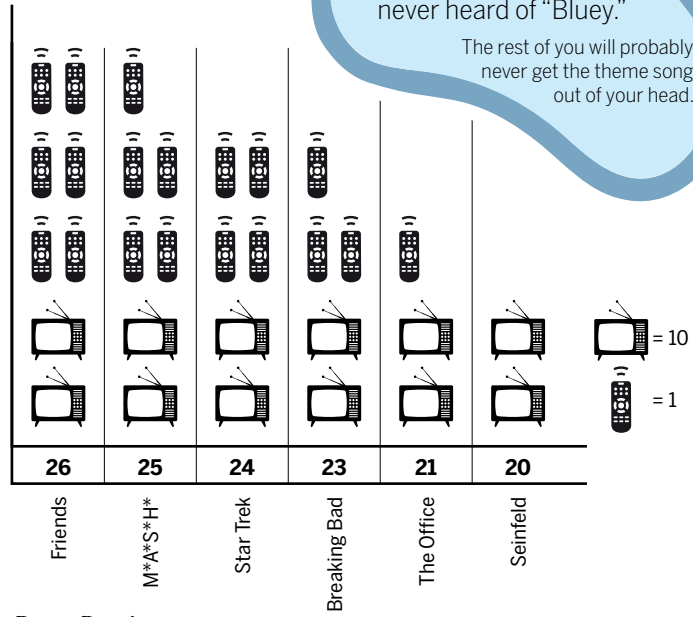
... you may be the outliers, but YOU’RE NOT ALONE.

AND, FINALLY,

congratulations to **PATRICK HARVEY ’80, ’82 M.S.**, who won the drawing for an awesome Florida Tech prize pack!

Thank you to everyone who participated in the Big, Fun Florida Tech Alumni Survey. We hope you had fun, got a good laugh or two and learned a little something about your peers—and hey, maybe even about yourself. Regardless, one thing is clear: While no two Panthers are the same, righty or lefty, boomer or millennial, Swifties, Barbies and Trekkies alike—**here, you belong.**

What’s the best TV show you’ve ever watched?



Fun Fact:

The No. 1 highest-grossing TV show of all time, “The Simpsons,” got 0 votes for the best TV show you’ve ever watched—we always have forged our own paths.



FORGET LEMONADE

MIDDLE SCHOOL STEM CLUB QUENCHES THIRST FOR SCIENCE

BY MARY-LOU WATKINSON

On a sunny day in October, cheers can be heard from a classroom at Palm Bay Academy Middle School.

Thirteen students are crowded around tables as part of the school's STEM Club, lighting up LED lights using batteries. No big deal, right?

Except the batteries they are using are lemons.

"Wow!" one of the students exclaims. "It smells just like a lemon candy."

The club, which meets once a month, was created through the combined efforts of Florida Tech assistant professor Pavithra Pathirathna and Palm Bay Academy Middle School's exceptional student education (ESE) teacher Laura Marshall.

Pathirathna says she met Marshall in 2019, when she enrolled her oldest child into kindergarten at Palm Bay Academy, as Marshall was his teacher.

"We never stopped talking," Pathirathna says. "Based on the interactions I had with her, I had a very positive outlook on the school. My son learned a lot, and I was pretty amazed by the work they were doing,

given the limited resources they had."

The school eventually ran into issues finding a consistent science educator. Marshall, knowing Pathirathna works as a chemistry professor at Florida Tech, reached out to see if she could assist.

"The school itself was so eager to establish this, but they didn't really have the right resources," Pathirathna says. "The kids are from underprivileged families, and they have no idea what this kind of science is. It's a whole different world."

Pathirathna applied for and won a National Science Foundation grant to help fund the club as an outreach activity. The grant will also fund a summer camp for a few club members to get hands-on experience in her lab at Florida Tech, where they will learn chemistry from Pathirathna and her graduate students.

"The STEM Club and upcoming summer program are invaluable to our students, who would not have these opportunities to explore the sciences due to their socioeconomic



status,” Marshall says. “This opportunity sheds light on STEM for our students and gives them hope and encouragement for their future occupations.”

During the first club meeting, Pathirathna had students fill out a short questionnaire to gauge how much they already knew. The form included questions like, “Have you seen a scientist?” “Have you met an engineer?” and, “What do you expect from this club?”

Results found that most students expected they would learn more about science and engineering from the club and that it would be fun and interesting.

During the following meetings, students performed experiments, such as building the lemon batteries and concocting “elephant toothpaste,” where students combined dry yeast, dish soap, warm water and hydrogen peroxide to create the foamy substance. After each experiment, Pathirathna explains the science behind it while students complete fill-in-the-blank notes.

“My idea is to conduct little experiments that we can do from things that we can find from around the house, just to give them an idea about what science is,” Pathirathna says.

After a few more experiments are completed, they will learn about scientific writing and presenting, which

will culminate in students creating posters and giving presentations on their scientific findings.

Students look forward to the STEM club every month, as well as the future summer camp, and more students ask to join every week, Marshall says. Based on this enthusiasm, she is hopeful the club, and other STEM initiatives, will grow.

“Other faculty here, at Palm Bay Academy, are interested in our program, and we would like to expand into other areas of STEM beyond what we have now,” she says. “We would welcome an opportunity to work with other Florida Tech staff, faculty and graduate students in the future. We are so very grateful for this partnership.”

Pathirathna says she wanted to start the club in middle school because she has found that many college freshmen are at a beginner level in science and mathematics. She hopes that catching students’ interests when they are younger, potentially even in elementary school, will help them build a strong foundation in STEM subjects and make them more prepared for university classes.

“It’s unfortunate in 2023, especially in the U.S., the kids are not aware of these things, which actually surprised me,” she says. “Coming from an Asian country and knowing how big of an exposure we have in STEM versus here—it’s

thrown me off. I don’t know why, but the moment they hear the word ‘chemistry’ or ‘science,’ they don’t even want to talk about it.”

However, the students have pleasantly surprised Pathirathna with their level of thinking and eagerness to learn. Working with college-level students, she has found they have a fixed mindset and do not handle change well. In middle school, however, most students have been flexible and eager to learn, she says.

“With these little kids, they’re ready for anything,” she says. “It’s just so much energy. Whether they know or not, it is like they’re always happy. They would never get frustrated, and I have a feeling that they’re always willing to accept changes.”

Pathirathna and Marshall hope the STEM Club, which runs until April, inspires students and presents them with opportunities they would not have otherwise had. They also hope they can continue similar outreach activities well into the future.

“Dr. Pathirathna has graced our campus with her knowledge and expertise,” Marshall says. “We look forward to partnering with her on future grants, and we hope this program will continue for years to come. Thank you, Florida Tech.”



Pathirathna was named

EDUCATOR OF THE YEAR

for 2023 by United Third Bridge Inc., the 25-year-old Florida group focused on promoting and encouraging the education of Hispanics and minorities, for her work with Palm Bay Academy.

“We, as educators, wouldn’t expect these things; we just do it to help and spread knowledge,” Pathirathna says.

A MESSAGE FROM THE FLORIDA TECH ALUMNI ASSOCIATION

Dear fellow Panthers,

It is a great honor to be named Florida Tech Alumni Association president, especially during the exciting time of welcoming our new university president, Dr. John Nicklow, and his wife, Dr. Stacy Nicklow. It is such a unique opportunity to be in this position as a new president is walking in the door, and I am truly looking forward to working with President Nicklow and the Office of Alumni Affairs on many exciting programs for the future.

I would be remiss if I didn't express my sincere appreciation, respect and admiration for our outgoing FTAA president, Fin Bonset. Together with the board, we had the challenging experience of working through the COVID-19 years—a time of extreme flux within the university. We were granted an extra year in our term to make up for lost time. We had fun along the way and made significant strides. It was truly an honor to serve as his vice president, and I am grateful he is still on the board to lean on his passion and dedication not only to the Alumni Association, but also to the university and students who have come to rely on his wisdom and knowledge.

To say I have big shoes to fill is an understatement, both figuratively and literally (as Bonset shared in his introductory letter, he dons a size 15 shoe). However, I am up for the challenge, and together with the incoming executive and alumni board members, I plan to increase the reach of the Alumni Association, continue to improve student life on campus, acknowledge the success of our alumni and create amazing future programs.

Florida Tech is celebrating our 65th year! Being a Panther at a young university is an amazing opportunity. Unlike at some universities that were founded many years ago, we can be a part of the foundation of our university—to continue to shape and mold what we will forever be known for.

We started with an idea and a 37-cent donation and today, we are a top 100 Best Value University (*U.S. News & World Report*) ranked 17th in the U.S. for graduate employability (Global Employability University Ranking).

This is an exciting time for all of us! Go Panthers!



YOUR ALUMNI ASSOCIATION OFFICERS

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

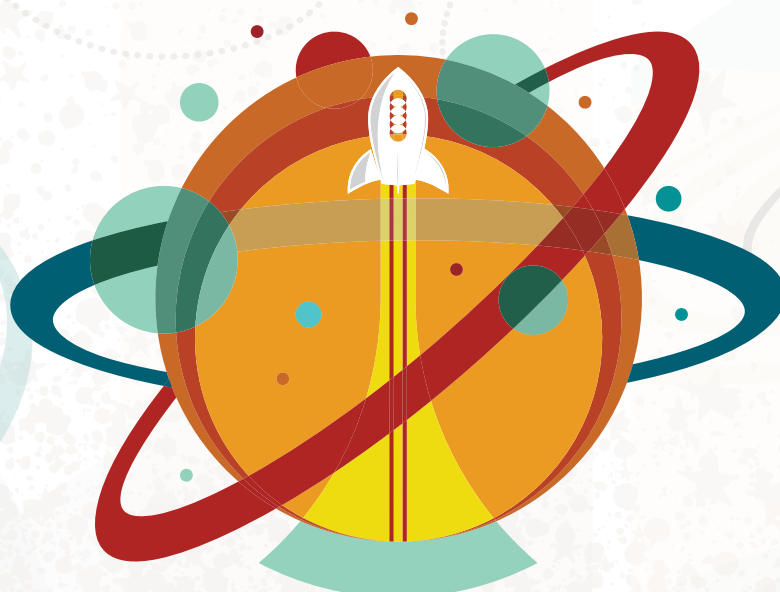
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Vice President | Merritt Island, FL | aysarkees@yahoo.com

Warren Pittorie '15, '18 M.S., '22 Ph.D.
Treasurer | Melbourne, FL | wpittorie2012@fit.edu

John Robertson '13
Secretary | San Juan Capistrano, CA | jtrobertson2009@gmail.com

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

Fin Bonset '96, '99 MSA
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1970s

GEORGE KREWSON '76 retired from Kennedy Space Center as a chemist after 40 years analyzing rocket fuel and oxidizer. He may or may not have been responsible for starting the streaking craze on campus but will neither confirm nor deny it. He does admit to not being as fast as he once was and now builds wooden boats.

1980s

1 SUE (DINKEL) MCKAY '80 and her husband **CRAIG MCKAY '81**, both proud rowing alumni, welcomed their grandson, Ronin Charles McKay, to the Panther family.

2 MICHAEL MULLANEY '88 was appointed executive vice president of business development for OTG, the hospitality group responsible for transforming the airport dining experience across North America.

3 COL. JOSEPH "JOE" WALDEN '88 MBA, '89 M.S., won his 16th national championship in powerlifting at the United States Powerlifting Association (USPA) Drug Tested National Championships in Las Vegas. Walden and his youngest daughter earned back-to-back father-daughter national championships. En route to the national title, Walden set a new world record in the squat for his age group.

1990s

ALEX SEIDITA '91 was appointed chief information officer for Aspida Holdings Ltd.

LT. COL. PAUL VANN '92 M.S. released his book, *Leadership Is Influence: A Three-Pronged Approach To Becoming A Leader Of Influence*, in October 2023.

4 DAVE JUNGKIND '93 M.S. was appointed the first chief revenue officer for Advanced Space LLC. In this role, Jungkind is responsible for the continued growth of the Advanced Space portfolio, supporting national security and civil and commercial customers.

5 JUAN CHIPI-RODRIGUEZ '98 was named a fellow of the College of Engineers and Land Surveyors of Puerto Rico. Chipi-Rodriguez works for Azure Cloud Solutions as the architecture senior manager of Microsoft Corp. In this position, he oversees the technical team that enables customers in Central America and the Caribbean.

2000s

PATRICK CARRENO '02 was promoted to director of aviation for Dallas Executive Airport, Dallas Love Field Airport and Dallas Vertiport. Previously, Carreno served as assistant director of operations and interim director for the department.

6 RENAUD BOIDIN '03 M.S. returned to Paris Airports Operator Groupe ADP as head of innovation for the engineering and capital projects division. He will help implement the decarbonization roadmap and achieve the group's sustainability objectives.

7 BRYAN JONES '03 M.S. has been named president of the construction division with Hourigan, a fully integrated construction and development firm. Under his leadership, the firm has received numerous awards and accolades, including *Engineering News-Record's* (ENR) 2021 Mid-Atlantic Contractor of the Year, 2022 Top 400 National Contractor and one of *Fortune's* 2022 Best Workplaces in Construction.

continued on page 34



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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

While other children in Kenya were playing video games in their school's computer lab, **MICHAEL KINOTI** '05 was teaching himself how to code.

Today, Kinoti is the director of engineering, marketing technology (growth platform), with Airbnb.

This role combines his love of travel with his passion for technology, as he leads the growth platform team that powers all the technology services and tools leveraged to drive more growth and engagement opportunities for the company.

"Airbnb's mission resonated with me to really focus on promoting belonging, creating a world where anyone can belong anywhere," Kinoti says.

As the child of an entrepreneur father and an engineer mother, Kinoti grew up inspired to achieve what others said couldn't be done.

"My mother's grit was inspiring," he says. "She was the only female in her university cohort, and time and time again, she has had to work harder than everybody else to prove herself. She became a leader at Kenya's major telecom company and directly contributed to bringing the country high-speed internet, giving my generation and ones after access to a world of information."

Kinoti grew up with one goal: work at Microsoft. He accepted a partial scholarship to attend Florida Tech for software engineering.

The cultural shock of leaving his home in Kenya was intimidating at first.

"I found myself feeling more comfortable when I arrived at Florida Tech and realized so many other international students would be going through the same experience I was."

The hands-on experience he garnered at Florida Tech helped enhance his résumé, getting him an interview with Microsoft on the spot at a university career fair. Afterward, he was flown to Washington for a full day of interviews and received a job offer.

He hasn't slowed down since.

Kinoti moved to Seattle and worked at Microsoft for 11 years. He started as part of the Microsoft Office team and later transitioned to its Bing Search division.

As he was exposed to new technology, Kinoti found himself drawn to Silicon Valley.

"Once you get to a point in your career where you're not growing the same way, you're not learning the same way or you just want a different challenge, it's okay to change," Kinoti says.

Having accomplished his Microsoft dream, he decided to move on, accepting a position with Uber's customer engagement platform team.

In February 2020, Kinoti took another leap of faith, joining Airbnb, and he has been moving up in the company ever since.

"My college experience at Florida Tech taught me how to be curious, to never stop learning and always embrace the adventure."

—Erin Alvarado



SPOTLIGHT ON

Michael Kinoti

FLORIDA TECH CONNECTION: '05 B.S. software engineering

AFTER TRAVELING TO OVER 55 COUNTRIES, WHAT'S YOUR NEXT BUCKET-LIST TRAVEL DESTINATION: Japan

HIDDEN TALENT: Professional DJ

ROLE MODEL: Former President Barack Obama

FAVORITE FLORIDA TECH MEMORY: Spending time in the engineering building in between classes, nerding out with other students. Also, spending time in the Rat, playing video games and eating pizza with friends.

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CHRIS SNYDER '03 was appointed in July 2023 as director of technology transfer and new ventures with Stevens Institute of Technology. In this role, he leads the university's technology transfer and commercialization efforts, helping to bring to market the ideas, technologies and solutions generated by Stevens faculty and students.

8 NONA OVRE '04 has been promoted to executive director of service at Satisloh, a global leader specializing in ophthalmic and precision optics manufacturing technology. She is the first woman to hold this title in North America.

9 MANISH JINDAL '06 M.S. celebrated his 20th year living in the United States in August 2023. Today, Jindal works for Amazon Web Services as the regional partner development leader and manages strategic global system integrators in the U.S.-Central and Canada region.

MATT GROSSI '08 was selected as a data scientist with the NOAA Fisheries Southeast Fisheries Science Center to oversee innovative data management solutions and cutting-edge research in machine learning and workflow automation.

DAVID HORNE '08 M.S. has been appointed vice president of trades with HII for the Newport News Shipbuilding (NNS) division. Horne is a third-generation shipbuilder and began his shipbuilding career in 1983 as a welder before entering NNS' Apprentice School as a pipefitter.

10 APRYL ALEXANDER '09 M.S., '12 Psy.D., has been appointed to the board of directors for Envision: You, a Colorado-based nonprofit organization dedicated to improving behavioral health outcomes for LGBTQ+ individuals.

11 LIZ (SNAPE) COLUCCIO '09, '12 M.S., and her husband, Raffaele, welcomed their first son, Thomas Pasquale Coluccio, May 18, 2023.



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12 ISHMAEL CREMER '09, '15 Ph.D.; **GEORGE LOPEZ** '17; and **MANUELA CORTES** '18 reunited for a float flight to a remote lake in Prince William Sound, Alaska.

13 JACK KINDRED '09, '13 M.S., is the assistant director of materials science and engineering content operations at Chemical Abstracts Service based in Columbus, Ohio.

14 FRANCISCO LASANTA '09 accepted a new position as project manager for Wanzek Construction Inc. Lasanta is involved in several developmental projects in Puerto Rico throughout crucial industries, such as transportation, health care, infrastructure and agriculture.

ALONDA WOODLEY '09 M.S. accepted a new position as portfolio manager for the Technology, Innovation and Partnership directorate at the National Science Foundation. In addition, Woodley has pursued her lifelong passion for real estate by becoming a licensed realtor with Keller Williams Realty Centre in Columbia, Maryland.

2010s

15 MUZAMMIL ARSHAD '10 M.S., '18 Ph.D., was promoted to associate professor at Texas A&M University in June 2023. He also authored a textbook on fluid mechanics and power using the latest pedagogical trends for student success and learning.

16 JOSHUA ARONOVITCH '12, '14 MBA, and his fiancé, Angela Miller, welcomed their daughter, Mia Niccole Aronovitch, into the Panther family March 3, 2023.

17 JOSHUA RICE '12 and his wife, Abigail Pasmore, welcomed their son, Luca Ian, Aug. 2, 2023. Rice and Pasmore have both accepted positions as first officers with United Airlines.

18 MAJ. LACEY LOSOLE '13 was promoted to major in the U.S. Army and is serving as a tactical officer at the United States Military Academy in New York. Since graduating from Florida Tech, Losole has held various positions, such as a platoon leader and battle captain in

Afghanistan and company commander of Alpha Troop 2-6 CAV in Oahu, Hawaii.

19 ADAM PRINKEY '13, '19 M.S., '19 Ph.D., has returned to Florida Tech as an instructor in the department of mathematics and systems engineering. Before this role, Prinkey was a faculty member at Keiser University Flagship Residential Campus, Eastern Florida State College and Indian River State College.

20 MELISSA WILBRANDT '14 MBA joined the Lockheed Martin Space team as a project engineer. Within her new role, Wilbrandt has been empowered to volunteer with nonprofits and looks forward to continuing to put effort into local disability companies.

21 DILAN GOBEIL '15 and **ALLIE (FOLCIK) GOBEIL** '17 were married in Vermont in July 2023 after meeting at Florida Tech during their undergraduate studies. Allie works for Exponent as an environmental consultant and Dilan works for HNTB as a project manager in bridge structures.

FRANK RIPLEY '15 accepted a new position with Hitachi Energy as an offshore wind pursuits manager.

22 MELISSA BELDON '16, '17 M.S., was promoted to senior principal engineer systems architect at Northrop Grumman Corp. in Melbourne. She serves as a subject matter expert for instrumentation and data systems.

23 LEONOL HASBUN '16 A.A., '18, '22 MBA, accepted a new position at The Mosaic Co. as a senior diversity and inclusion specialist. Within her new role, Hasbun will work with the diversity and inclusion networks to help facilitate a work environment where employees feel heard and represented.

24 BEN HOERLEIN '16 became a Society of Actuaries fellow and has been promoted to actuary at Protective Life. Hoerlein's new designation and promotion will allow him to soon become a product pricing lead, as well as to transition to a managerial role.

continued on page 36

AMANDA WISE '16 M.S. has dedicated her career to giving parents peace of mind about their children—and Florida Tech has done the same thing for her.

In February 2008, Wise accepted an entry position with Access411, at the time, a small, family-owned business created by William Morrison, Wise's father and a former teacher and assistant principal in Baltimore in the '90s.

What started as school lanyards with students' Polaroid photos attached has grown into the CAAS System, a software that creates student ID cards that they scan throughout their day—when they get on the bus, arrive at school, are marked present in class, arrive at afterschool clubs, etc. Data is then sent to school district leaders and students' guardians through an app.

The program has now been implemented in over 1,500 schools throughout the nation, including New York City, Baltimore City and District of Columbia public schools.

Today, Wise serves as Access411's director of accounts, a position she largely credits her online master's degree from Florida Tech for achieving.

"The classes at Florida Tech helped me gain so many skills necessary to help drive the growth of Access411, support the schools that we partner with and work on projects, including software rollouts and data integration," she says.

After her son, Shawn Jr., was born, Wise and her husband noticed that he was showing the early signs of autism and needed support. She enrolled Shawn Jr. in a research study and, later, full-time applied behavior analysis therapy on site at The Scott Center for Autism Treatment.

"The services provided by The Scott Center were life-changing for our family," she says.

A few years later, Wise and her husband welcomed their second son, Kamon, who was also diagnosed with autism and started attending The Scott Center with his older brother.

Throughout their journey with The Scott Center, the boys have learned how to follow directions, communicate through sign language, dress themselves, eat new foods and use the restroom on their own.

Wise, her husband and her stepdaughters also attended training sessions at The Scott Center as a family to learn the tools and skills they needed to help support the boys with their treatments.

"Florida Tech challenged my sons and our family to become more than we could have ever imagined," Wise says. "I would like to say a special thank you to Florida Tech, The Scott Center for Autism Treatment staff and the students who worked with my children and always went out of their way to make us all feel welcomed and loved."

—Erin Alvarado



SPOTLIGHT ON

Amanda Wise

FLORIDA TECH CONNECTION: '16 M.S. information technology

CELEBRITY WHO YOU WOULD LIKE TO GRAB DINNER WITH: Taylor Swift

FIRST JOB: Working at a bagel shop

MOST USED APP ON YOUR PHONE: Facebook

FAVORITE THING TO DO TO RELAX: Ride my bike

QUOTE YOU LIVE BY: "A woman is like a tea bag—you can't tell how strong she is until you put her in hot water." —Eleanor Roosevelt

continued from page 35

25 ARIANA TATE '16 was promoted to senior consultant at Booz Allen Hamilton. This promotion came the same week Tate presented a software solution to her client, the National Cancer Institute.

DAVID LABRECQUE '17 serves as assistant vice president of research for JETNET, the world's leading resource for business aviation data. In this role, Labrecque is responsible for a highly specialized team of individuals who collect, validate and record time-sensitive data needed to power JETNET's aviation database and further aviation worldwide.

JOHN BREEN '18, '22 M.S., accepted a new position with Blue Origin on New Glenn Umbilicals after four years with Jacobs, supporting NASA's Artemis 1 mission, a flight test for the Orion capsule to eventually return humans to the moon.

CHRIS BRYANS '18 M.S. accepted a new position in June 2023 as a project manager at Dialectic Engineering. He credits Florida Tech's project management program for giving him an edge in the industry.

26 AYUSH JHA '18 was promoted from a level two software engineer to a level three software engineer at FedEx, working on geocoding and address validation applications.

27 KATHERINE WEATHERFORD '18 MBA was promoted to manager, finance product enablement with PayPal.

28 AISHA BITAR '19 M.A. is a Board Certified Behavior Analyst (BCBA) working as a program specialist with children and adults diagnosed with autism spectrum disorder. Within her role, Bitar is responsible for providing training and teaching applied behavior analysis (ABA) to new employees.



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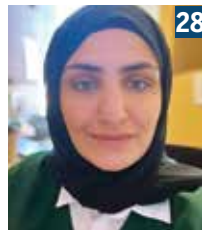
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KEVIN KOLAR '19 has joined EdChoice, a nonprofit advocating for educational choice, as legal affairs director.

2020s

29 ABDALLAH ALKINDI '21 accepted a new position as a GIS installation and commissioning supervisor with Hitachi Energy Saudi Arabia.

30 BILL BAILEY '21 MBA is CEO of Radiance Technologies, which develops innovative solutions for

defense, intelligence and civilian customers' advanced challenges. Radiance has over 1,000 employees, including more than 100 Florida Tech graduates.

31 ALLISON (KLUVERS) CAUDLE '22 M.S. transitioned out of the U.S. Army in May 2023 and accepted a position as a resource analyst for the Close Combat Lethality Task Force in Fort Moore, Georgia, reporting to the Office of the Secretary of Defense.

DENNIS MORENO ORTEGA '22 M.S. is a data analyst at Embry-Riddle Aeronautical University, where he contributes to both the College of Arts and Sciences and the Academic Advancement Center, while also pursuing his master's degree in data science.

ANDY ROMERO '22 M.S. accepted a senior project engineer position at Lockheed Martin Enterprise Operations, driving digital transformation across the enterprise.

32 REVATI KULKARNI '23 M.S. is a Board Certified Behavior Analyst working with Bierman Autism Centers in New Jersey. Kulkarni works with children with autism ages 2 to 12 and creates behavior support plans to address skill deficits and increase overall independence.

33 EMILY SALWAK '23 is attending the University of New Hampshire Franklin Pierce School of Law and has been awarded its Dean's Scholarship.

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IN MEMORIAM

COL. CARL PRICE

'75 M.S. passed away Aug. 13 in Portland, Oregon, after a brief illness. Price served in the U.S. Army for 30 years, during which he was stationed at many bases across the world. He served one year in Vietnam and two tours of duty in Germany, retiring from the military in 1992.

MICHAEL BRIGGS '77 A.S., who attended Florida Tech's Jensen Beach campus, passed away Sept. 13 at age 65. With a career in the oil and gas marine exploration industry spanning over 40 years, Briggs' dedication and hard work were evident to all who worked with him.

STEPHEN PUTMAN '80 passed away peacefully at home Aug. 30 after a long and courageous battle with glioblastoma. While attending Florida Tech, Putman was elected student body president. He spent most of his career at UPS, with over 30 years of service.

RAYMOND RIHA '90 M.S. passed away in Williamsburg, Virginia, in August 2023. Riha served in the Coast Guard, and his career contributions were most notable in the aeronautical and nuclear engineering industries.

CAROLYN BANEY '92 university supporter, College of Psychology and Liberal Arts Outstanding Alumni Award winner and wife of trustee emeritus Dick Baney, passed away Dec. 24.

JOSEPH "JOE" NESTER '08 passed away Aug. 13 in Alexandria, Virginia, at age 38. When not working at his dream job with NASA, Nester enjoyed playing online games with his friends.

BROOKS HAROLD MAXWELL '15, '20 M.S., passed away April 21 at age 29. During his time at Florida Tech,

Maxwell was a member of the Pi Kappa Alpha fraternity. His brilliance made him an invaluable senior specialist, systems engineer at L3Harris Technologies Inc., where he designed, tested and sometimes exploded reprogrammable satellites.

KAITLYN "KAITY" KENYON '23 passed away Aug. 26 in Dothan, Alabama, at age 34. Kenyon cherished her twin daughters, Arianna and Katianna, and had a feisty "cando" personality that pushed her to pursue her goals both professionally and personally.

DAVID CLAPP, Florida Tech professor emeritus and pioneer in the development of distance learning courses, passed away Aug. 9 at age 85. He spent more than three decades at Florida Tech, before which he achieved the rank of captain in the U.S. Air Force, served as a professor at what is now the University of Central Florida and worked at the Centers for Disease Control.

EDWARD CROY, a laser research technician and technology whisperer who spent nearly 15 years at Florida Tech helping to harness the university's tools and machines for education and industry, passed away Sept. 12 at age 64.

JAY LALLY, Florida Tech's associate vice president of enrollment management who oversaw the university's financial aid strategy and operations for 27 years, passed away Nov. 3 at age 65 following complications related to an existing heart condition.

BARBARA RITTINGER, former circulation desk supervisor at Florida Tech's Evans Library, passed away July 22 at age 81. Rittinger worked for many years in different libraries in both the public and private sectors.

In Memoriam Tim Wakefield



Alumnus **TIM WAKEFIELD**, a gifted athlete and compassionate soul, passed away Oct. 1 from brain cancer.

A first basemen on the Panther baseball team in the late 1980s, he was named Most Valuable Player in 1987 as a sophomore and 1988 as a junior. Some of his records still stand, including single season slugging percentage and homeruns in 1987 (.798 and 22, respectively) and his career slugging percentage of .646.

In 1988, he was drafted by Major League Baseball's Pittsburgh Pirates as a first baseman. That began a 19-year career that saw Wakefield flourish as a pitcher for the Boston Red Sox.

A member of nine post-season teams for the Red Sox, Wakefield helped the team break the 86-year-old "Curse of the Bambino" with its 2004 World Series victory, winning the World Series again in 2007.

His gifts toward Florida Tech's baseball program helped improve the field with lighting and fund what is now the Tim Wakefield Batting Facility. Beyond Florida Tech, he was a critical and longtime benefactor for Melbourne's Space Coast Early Intervention Center (now Space Coast Discovery), where he is honored as director emeritus.

In the New England area, his Wakefield Warriors Program was created in partnership with Boston's Franciscan Hospital for Children, and he was active with the Pitching in for Kids organization and the Garth Brooks Touch 'Em All Foundation.

In 2010, Wakefield was honored with baseball's Roberto Clemente Award, presented to the player who best reflects the spirit of giving back to the community.

The two-time world champion was also a two-time commencement speaker at Florida Tech, offering remarks in 2006 and again in 2019, when he received an honorary degree. He has won the university's most prestigious awards, including the Jerome P. Keuper Distinguished Alumni Award (2016), the President's Medal (2006) and the Alumni Association's Humanitarian Award (2006).

"Florida Tech is relentless in what we do, from our STEM focus to our innovative teaching to our success in producing world-changing graduates, and we are honored to be associated with a person who embodied that relentless spirit with as much grace, passion and conviction as Tim Wakefield," said Florida Tech President John Nicklow.



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Alumni Down Under

3 Panthers Play Critical Roles in the World's Largest Coral Reef Restoration and Adaptation Research Program

By Erin Alvarado

After they graduate, many Florida Tech alumni embark on new adventures and begin exciting careers around the world. Less often, these careers merge, bringing three alumni from different decades across the globe to work on the world's largest coral reef restoration and adaptation research program.

But such is the case for **DAVID LENNON** '87 A.S., '89, **KEVIN ERICKSON** '07 and **CARLY RANDALL** '16 Ph.D., Australian Institute of Marine Science (AIMS) employees and members of the Reef Restoration and Adaptation Program (RRAP), who each play different yet equally critical roles in helping the Great Barrier Reef resist, adapt to and recover from climate change impacts.

The AIMS' goal is to provide decision-makers with an innovative suite of safe, acceptable and cost-effective interventions to help protect the reef from the impacts of climate change in conjunction with reef management and carbon emission reduction best practices.

Lennon, project manager for reef monitoring and recovery projects, oversees several initiatives, including a coral reef condition indicator for managers; a new fish stock assessment of nursery habitats and nearshore and offshore reefs in the Great Barrier Reef; and EcoRRAP, which collects essential data to guide reef interventions.

"Growing up, I was obsessed with diving and being underwater. Even now, whenever I look at water, fresh or salt, I want to be under it," Lennon says, "This inspired me to want to know how things work and fueled my desire to understand how marine ecosystems function."



From left: Kevin Erickson, David Lennon and Carly Randall

Erickson, RRAP's industry development lead, spearheads the program's efforts to scale the research and development phase to the deployment phase—which will enable outputs to increase from hundreds of thousands to tens of millions of deployed corals over the coming decade—by incorporating industry partnerships.

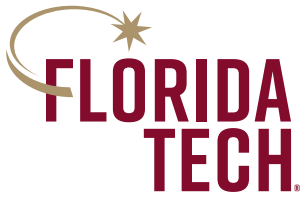
"I have been fortunate to work with several Florida Tech marine biology alumni since graduating," Erickson says. "It is great to once again be working alongside fellow Panthers on such an important mission."

As a senior research scientist, Randall leads several AIMS projects focused on understanding the early life-history ecology of stony corals and the drivers of reef recovery following disturbances. She works to describe the complex and nonlinear relationships between the environment and recruit survival and to apply this knowledge to improve reef restoration practices. She

does this by combining coral-spawning research with mechanistic laboratory experiments and field deployments. She also works closely with Aboriginal communities to build capacity and empower Traditional Custodians to manage their sea countries.

"My Ph.D. research, which was funded by the National Science Foundation, allowed me to develop my lab, field and analytical skills in coral reef science that I apply to restoration science today," Randall says. "My time at Florida Tech was a wonderful period of scientific growth and exploration, and I'm so thankful for the opportunity and education I received."

While RRAP is initially focused on developing technology and solutions to help the Great Barrier Reef, together, Lennon, Erickson and Randall are helping develop solutions that could also be applied to other reefs in Australia and around the world.



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ENGINEER'S COTILLION

On June 6, 1958, Florida Tech founding president Jerome P. Keuper and his inaugural Brevard Engineering Institute (BEI) confederates hosted an "Engineer's Cotillion" at the Trade Winds Club in Indialantic, Florida. A semiformal dance featuring live music, Hawaiian dancers and a barbershop quartet, the cotillion aimed to inform the public about the institute and to raise money to publish its initial course offerings, of which there were nine.

BEI became Florida Tech, a premier scientific and technological university whose impact reaches around the globe, and 65 years later, its catalog includes more than 2,500 courses that together make up more than 200 degree programs spanning disciplines from engineering and science, business, aeronautics and aviation to psychology, communication and the humanities.

Pictured here at the Engineer's Cotillion (left to right): Jack Hazard, Keuper, J. Spitznogle, Harold Dibble, D'Alton Meyers, George Shaw, Garret Quick.

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