

The Conduit

NEWS FROM THE COLLEGE OF ENGINEERING AND SCIENCE

FALL 2026

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New Leadership, National Distinction and the Future of Innovation

Dear Florida Tech Family,

Welcome to the fall 2026 issue of The Conduit: News from the College of Engineering and Science at Florida Tech!

As I step into my role as dean, I feel incredibly proud to be part of this community. Since joining in July, I have been spending most of my time learning about the great work happening across our campus. I quickly realized that our college is a place where students and faculty truly love to build, discover and solve real problems.

Right now, our college is gaining significant national attention. I am excited to share that four of our students have recently won the prestigious National Science Foundation Graduate Research Fellowship (NSF GRFP). At the same time, three of our faculty members have earned the highly respected NSF CAREER awards. These are some of the highest honors in the country for early career researchers and students, and bringing home this many honors at once is unprecedented for our campus.

We are bringing the same energy into our classrooms, particularly with our expanding emphasis on artificial intelligence and cybersecurity. Our objective is to equip our students with the contemporary tools and competencies essential for their future professional careers by seamlessly integrating them into every project and program within our college.

Moving forward, my top priorities will focus on expanding programs of innovation, securing student scholarships and providing the resources needed to recruit and retain world-class faculty. As we look ahead, I want to stay connected with the people who helped build this college. We always love to hear from former students. Please consider sending an email to say hello and share what you are up to.

Thank you all for making me feel so welcome during my first few weeks as a Panther. I am excited for what we will build together next.

Warm regards,
Murthy Ganapathy, Ph.D.
Dean, College of Engineering and Science



Panthers on the Rise

1 BARBARA BLONDER '85 M.S.

Barbara Blonder '85 M.S. serves as vice mayor of St. Augustine and associate professor of natural sciences at Flagler College.

Blonder played a key role in creating Flagler's coastal environmental science program, the first major of its kind at the college. Through her work building the program, she has helped shape the college's curriculum and prepare a new generation of environmental professionals entering the field.

Beyond her academic work, Blonder has taken on leadership roles in campus governance, including serving as chair of the Flagler College Faculty Senate and directing the school's undergraduate research efforts.

2 STEVE LOCHMANN '86 M.S.

Steve Lochmann '86 M.S. has been elected second vice president of the American Fisheries Society, the world's oldest and largest professional organization devoted to fisheries and aquatic species. The society represents thousands of professionals and students working in fisheries and aquatic resource research, conservation and education across North America and beyond.

Lochmann has previously led the organization at multiple levels, having served as president of its Arkansas Chapter, the Southern Division and the Fish Culture Section.

A professor of fisheries management and ecology at the University of Arkansas at Pine Bluff, Lochmann has made training future fisheries professionals a central part of his work. He regularly brings students to state, regional and national society meetings, connecting them with peers from other schools, as well as biologists and scientists from government agencies, nonprofits and private industry.

Heading into his new role, Lochmann plans to prioritize stronger science communication, drawing on the range of perspectives within the society's membership and adopting new technologies to advance the field.

3 REBECCA LOCHMANN '88 M.S.

Rebecca Lochmann '88 M.S. has built much of her career around a simple idea: Gill-breathing vertebrates may hold real answers to global food insecurity, with aquaculture playing a key role in feeding communities worldwide.

Food insecurity, even within the United States, wasn't something Lochmann fully grasped until she moved to Arkansas, where the problem became far more visible to her. That's when her nutrition background and her understanding of seafood as a near-complete source of essential nutrients started to click.

A fish nutritionist and professor at the University of Arkansas at Pine Bluff (UAPB), Lochmann earned a Fulbright grant that sent her to Ghana to study catfish, a staple of the country's food supply. She carried the expertise and teaching approach she'd developed at home into that work overseas.

At UAPB, Lochmann teaches introductory and advanced aquaculture courses along with aquatic nutrition, regularly bringing students into fisheries, wet labs and farms so they can engage with the material firsthand.



4 SUNITA (SUNI) WILLIAMS '95 M.S.

Suni Williams '95 M.S. has retired from NASA after a 27-year career that included three trips to the International Space Station and a string of spaceflight records.

Over her career, Williams spent 608 days in space, the second-highest cumulative total among NASA astronauts. Her longest single mission lasted 286 days, tying her for sixth on the list of longest spaceflights by an American, a mark she shares with fellow astronaut Butch Wilmore following NASA's Boeing Starliner and SpaceX Crew-9 missions. She also carried out nine spacewalks totaling over 62 hours, more than any other woman in history and fourth-most overall. Additionally, she holds the distinction of having run the first marathon in space.

Her spaceflight career began in December 2006, when she launched aboard space shuttle Discovery on the STS-116 mission, later returning to Earth on Atlantis with the STS-117 crew. As a flight engineer for Expeditions 14 and 15, she carried out four spacewalks, a record at the time.

In 2012, Williams returned to space for a 127-day stay as part of Expedition 32/33, taking command of the station for Expedition 33 and performing three spacewalks to fix a radiator leak and swap out a solar array power component.

Her final mission came in June 2024, when she and Wilmore flew aboard Starliner as part of NASA's Boeing Crew Flight Test. The pair joined Expedition 71/72, with Williams again serving as commander for Expedition 72, completing two more spacewalks before returning to Earth in March 2025 on SpaceX's Crew-9 mission.

5 AHMAD AL-BANNA '00

Ahmad Al-Banna '00 has been named CEO of Makhazen, a Kuwait-based infrastructure, logistics and industrial services company.

Al-Banna has worked for more than 20 years within the Makhazen Group, most recently as senior vice president at Agility Logistics Parks Kuwait. In that role, he led a major overhaul of the company's logistics and

industrial real estate holdings, growing the portfolio into a globally recognized operating platform.

Known for results-focused leadership and strong execution, he has managed complex build-operate-transfer and public-private partnership agreements with government entities and built lasting relationships across public- and private-sector stakeholders.

6 DWAYNE CODRINGTON '04

Dwayne Codrington '04 secured a full-time role with Microsoft before he had even graduated from Florida Tech.

He proceeded to spend a decade at Microsoft, leading teams across a range of products, including Office, SharePoint and the early foundations of what would become Office 365.

He then spent five years at SkyKick before accepting his current role as a senior software engineering manager on GoDaddy's Identity Platform team.

Codrington and his team manage the systems that verify people's identities when they log in to the platform and determine what information or tools they can access once they are signed in. Everyone at GoDaddy—employees and customers—uses these tools to keep accounts secure.

"A big part of my role is coordinating all the moving pieces—planning, setting strategy, keeping our services running securely and managing staffing needs," Codrington explained. "It's about developing future talent, supporting the great people we have and bringing teams together to stay ahead of challenges."

Codrington has also made a significant impact through GoDaddy's Black in Tech (GBIT) engineering-focused summer intern outreach program.

In this role, he has helped create meaningful connections between interns and full-time engineers across the company, strengthening one of GoDaddy's most important talent pipelines.



7 RYAN HALONEN '04

Ryan Halonen '04 is applying his training to a problem facing both marine life and the fishing industry: keeping humpback whales safe from crab traps without slowing crabbers down.

Halonen co-developed a modified, app-controlled crab trap designed to keep whales clear of fishing lines. The system tucks the line and buoy inside a device called a "sled," which attaches to a string of traps resting on the seafloor. Because the line stays contained until needed, whales have nothing to become entangled in while the traps sit below. When crabbers are ready to collect the catch, they locate the traps using GPS, then send an acoustic signal through a phone app that releases the line and buoy to the surface.

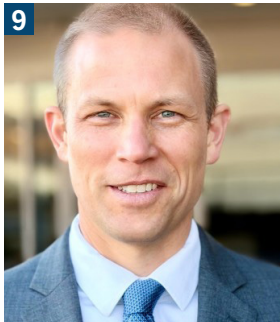
Crabbers ran field tests of the system under experimental permits from April to July 2025. The trials showed the traps could be reliably located and retrieved through the app's GPS feature, with the release mechanism functioning correctly more than 98% of the time. Over the course of testing, crabbers landed nearly 140,000 pounds of crab worth close to \$1 million.

Halonen co-owns Sub Sea Sonics, a marine technology company that designed and builds the equipment. The California Department of Fish and Wildlife has approved the technology, which entered commercial use for the first time in April.

8 ALTAIR S. WATSON '06 MAT

Altair S. Watson '06 MAT has been named to the 2026 Forbes | SHOOK Best-In-State Women Wealth Advisors list. Watson serves as a financial advisor at Edward Jones and was ranked No. 72 in the North Florida region.

The ranking honors financial advisors distinguished by strong practice standards, clean compliance records and the level of assets they manage. This year's list featured more than 2,800 women nationwide who, together, oversee close to \$4 trillion in assets.



9 MIKE JERUE '15 M.S.

Mike Jerue '15 M.S. has been named chief investment officer of the Federal Retirement Thrift Investment Board, the largest pension fund in the United States. Jerue, a 10-year veteran of the agency, had served as deputy chief investment officer since 2020.

The board administers the Thrift Savings Plan for more than 7 million participants and beneficiaries.

In his time with the agency, Jerue has helped guide several major initiatives, including improvements to the plan's Lifecycle Funds, a smooth transition of the benchmark used for the International Fund, and efforts that kept the Thrift Savings Plan running during government shutdowns.

10 INDIAELLA KEMM-PINEIRO '19

Indiaella Kemm-Pineiro '19 serves as a brigade future operations (FUOPS) officer with the U.S. Army, where she helps guide forward operational planning and long-range strategic initiatives essential to mission success.

In this role, she works closely with leadership to align resources, anticipate operational needs and apply advanced project management practices that support seamless transitions across rapidly changing military environments.

"Within my role, I oversee the planning for our brigade's training exercises," she said. "My role centers on coordinating and preparing large-scale training events that keep our units sharp, ready and mission-effective."

With experience as both an observer coach/trainer, battle captain and battalion operations officer, she helps refine operational strategies and strengthen military leadership. Her emphasis on collaboration, precision and readiness ensures units are prepared to execute complex missions with confidence.



11 LAUREN-ANN GRAHAM '20, '23 M.S.

Lauren-Ann Graham '20, '23 M.S., received the Alumni Legacy Award at the 2026 WISE Awards March 12.

Graham is a mechanical test engineer working on NASA's Orion spacecraft, which is designed to carry astronauts back to the moon. While at Florida Tech, she completed two internships with NASA and served as a jet propulsion engineering intern with Larsen Motorsports. She also became a spokesperson for NASA and the Blazing Trails educational series, "Rockets to Racecars."

Through her STEM outreach platform, "nasa.lag," Graham has built a strong presence in local and national STEM communities. She appeared on one of Florida Tech's "The College Tour" episodes, has spoken to hundreds of students from elementary school through college and joined a lecture series alongside NASA astronauts. She continues to advocate for STEM education through outreach and mentorship.

12 SYDNEY CORDEIRO '26

Sydney Cordeiro '26 received the Student Catalyst Award at the 2026 WISE Awards March 12.

Cordeiro has been active in Phi Sigma Sigma, the College Players, the Panther Spirit Squad, the University Sustainability Council and many other collaborative research teams, consistently strengthening communication, accountability and shared purpose. Her work has earned her induction into the Order of Omega and Tri-Alpha Honor Society, along with two Outstanding Student of the Year honors.

She has led interdisciplinary research teams in ocean engineering and sustainability, applying her technical expertise to projects with real-world environmental and social impact. From designing autonomous and manual marine vessels to leading philanthropic work centered on land, animals and community, Cordeiro consistently turns individual effort into collective progress while keeping innovation accessible, ethical and community centered.

13 RYAN HOLLER '23

Ryan Holler '23, founder and CEO of StratoVec, has launched the company's first product: the Engine Analysis Matrix (EAM), an educational platform that lets engineering students design jet engines that don't yet exist.

Holler started building the EAM as a Florida Tech student to work through his coursework in propulsion and engine design.

The EAM flips the conventional engineering software process. Users start by entering the outcomes they want, such as altitude, Mach number and desired thrust, and the program generates engine configurations to match. A built-in flight simulator then lets students load their design into an aircraft to test how it performs in the air.

Florida Tech students can use the software at no charge. Holler created a rolling sponsorship program that gives Panther design teams free access whenever they need it, without waiting on a set application window.

"By offering these as free, rolling sponsorships, we ensure that a team's momentum is never stalled by budget cycles or administrative deadlines," Holler said in an interview with The Crimson. "We want to empower Florida Tech students to move at the speed of their own ideas."



JOB IN AN ALTERNATE UNIVERSE: Cake baker

FLORIDA TECH CONNECTION:

'13 B.S. space sciences: solar, earth, planetary

LAST BOOK READ:

The Guest List by Lucy Foley

CELEBRITY TO PLAY YOU:

Emma Watson

FAVORITE PLANET: Earth

She Fell in Love With the Moon.

Now, She Helps NASA Explore It.

Marie (McBride) Henderson '13 fell in love with the moon early in life—and has since transformed that passion into an extraordinary career.

Henderson is a planetary scientist at NASA's Goddard Space Flight Center, working in partnership with the University of Maryland, Baltimore County, since 2021.

A key contributor to NASA's return-to-the-moon efforts, she served as deputy lunar science lead for the Artemis II mission.

But long before she worked alongside astronauts and mission control, Henderson was a high school student in a small Pennsylvania town—someone who dreamed of NASA but didn't yet know how to reach it.

That changed the day she stumbled across Florida Tech on an old college-match website.

"I was looking at space sciences and aerospace engineering because I wasn't sure which path I wanted yet—and that's when Florida Tech popped up," Henderson says.

From that moment, the decision was easy.

Today, that same passion for space exploration defines her work.

"My work ranges from training astronauts in lunar science and imaging to leading the Science Evaluation Room in Mission

Control," she explains. "This modern version of Apollo's 'science backroom' played a critical role during the mission, and I guided the science team there through key moments, including the lunar flyby and downlinking the first images returned from the moon."

“It was an honor to be a member of the Lunar Science Team and to be a part of the success and ‘moon joy’ of the Artemis II mission.”

Henderson also collaborated closely with data systems specialists to map how information would travel from the spacecraft to the ground and, ultimately, into the hands of scientists for analysis.

"During the Artemis II mission, every bit of training, every simulation, every planning session and every data workflow we built mattered," Henderson says. "All of it came together so our team could make the absolute most of every moment the crew spent looking at the moon."

"It was an honor to be a member of the Lunar Science Team and to be a part of the success and ‘moon joy’ of the Artemis II mission."



ASSOCIATED BUILDERS AND CONTRACTORS



For the first time since COVID-19 struck more than six years ago, Florida Tech participated in the ABC Construction Management Competition, the annual test for the nation's top construction management students sponsored by [Associated Builders and Contractors \(ABC\)](#) member chapters around the country. Florida Tech returned to the competition in March in Salt Lake City, Utah, sending eight students. Included in the eight were senior Aren Marsh, one of four core team members who applied their skills in estimating, project management, quality control and safety, and Genevieve Spitaletto '26, who served as an alternate team member.

Marsh is a [construction management major](#) who serves as president of Florida Tech's ABC student chapter. He joined as a freshman and has previously served as chapter treasurer and vice president. Spitaletto graduated with a bachelor's degree in construction management and a [minor in finance](#) and served as ABC chapter president for two years, helping revive the club from just a few active members into a thriving organization. We spoke with Marsh and Spitaletto about all things ABC and the impact it has had on their college experiences and those of other members.

What is ABC all about? What does membership entail?

Marsh: Florida Tech ABC is the student chapter of the parent organization, Associated Builders and Contractors, which includes more than 24,000 commercial and industrial contractors, subcontractors, suppliers and construction-related firms. As part of the student chapter, members get involved in events alongside some of these contractors, opening the door to potential job opportunities. Membership involves a monthly meeting, along with any additional involvement a member chooses to commit to.

What opportunities or benefits does ABC offer to students?

Spitaletto: ABC offers students countless opportunities to grow, both professionally and personally. Members have access to networking with contractors, project managers and company executives, as well as internships, full-time job opportunities, jobsite tours, guest speakers, leadership development, construction competitions, scholarships and community service projects. It also helps students build confidence, improve communication skills and establish professional relationships before graduation.



How has your involvement in ABC impacted your college experience?

Marsh: My involvement with ABC has allowed me to make friends and connections with a lot of like-minded people. It has given me many opportunities for jobs and let me learn much more while in college, including through my internships.

Spitaletto: ABC had one of the biggest impacts on my college experience. It helped me develop leadership skills, expand my professional network and gain confidence in communicating with industry professionals. When I became president, our chapter had only a few active members. Over the next three years, we rebuilt the organization into an active and engaged chapter by increasing membership, hosting regular events, strengthening relationships with local contractors and creating meaningful opportunities for students. Those experiences prepared me for my career far beyond what I learned in the classroom.

What is your favorite part of being a member of ABC?

Marsh: My favorite part about being a member of ABC is meeting all the people that I did and making the connections that I still have to this day.

Spitaletto: My favorite part was building relationships with both students and industry professionals. It was incredibly rewarding to watch our chapter grow and see members earn internships and full-time positions because of the connections they made through ABC. I also enjoyed organizing events that brought students and professionals together, knowing those experiences could have a lasting impact on someone's career. Seeing the chapter evolve from just a handful of members into a thriving organization is something I'll always be proud of.

Final thoughts?

Spitaletto: ABC was the greatest accomplishment in my college career. From an inactive club of just three members, no bylaws or constitution, and no foundation, I put in the effort I knew would pay off because of the potential that the organization had for impacting our students beyond my time at Florida Tech. I am forever grateful for the experiences from our networking events with our parent chapter, ABC Florida East Coast, and our ABC National Construction Management Competition. ABC has bridged the gap between college students and industry professionals and has given many students internships, jobs and knowledge that cannot be learned from a textbook.

Happenings



FLORIDA TECH COLLABORATES WITH BRAZILIAN INSTITUTES TO SPUR SCHOLARSHIP, RELATIONSHIPS

The culmination of a [collaboration](#) more than two years in the making between Florida Tech and Brazil's SENAI Institutes of Innovation and Technology brought professor [Steven Lazarus](#) and students Jaedon Benbow, Allie Barnett '26, Trinity Abraham, Lucas Silva and Aaron Bennett to Santa Catarina, Brazil, for five days of engagement and enrichment in May.

The visit blended scholarship, such as student presentations, technical talks and tours of advanced manufacturing and cybersecurity facilities, with cultural experiences, including sand sledding on the dunes at Joaquina Beach, hiking at the Parque Natural Municipal da Lagoinha do Leste, and a visit to the Projeto Tamar.

"It was an immersive experience in research and key topics as we lived like locals," Lazarus said.

A \$40,000 grant from Partners of the Americas' 100,000 Strong in the Americas initiative made the visit possible. The award, secured by a collaboration led by Florida Tech professor and principal investigator [Troy Nguyen](#) and partners at SENAI, supports international partnerships that strengthen education cooperation, expand institutional capacity and increase opportunities for student exchange and workforce training.

The partnership is designed to draw on the expertise of both institutions to strengthen disaster preparedness in at-risk communities in Brazil and the U.S. Through the integration of satellite data, AI-driven forecasting and mobile alert systems, the project seeks to enhance disaster monitoring, risk assessment and response capabilities.

The exchange began in April, when a group of researchers and project managers from SENAI visited Florida Tech for more than a week to discuss collaborative research opportunities.

CARVALHO ELECTED TO ACADEMY OF SCIENCE, ENGINEERING AND MEDICINE OF FLORIDA



Professor [Marco Carvalho](#) has been [elected](#) to the Academy of Science, Engineering and Medicine of Florida.

The holder of multiple patents, Carvalho conducts research in artificial

intelligence and machine learning applied to cybersecurity and critical infrastructure protection; tactical and cognitive networks and multi-agent systems; and human-agent teamwork.

"I am proud to have been elected to the Academy of Science, Engineering and Medicine of Florida," Carvalho said. "It is an honor to be in such great company."

Since arriving at Florida Tech in 2012, Carvalho has conducted research sponsored by the Department of Homeland Security, the Department of Defense, the Air Force Research Laboratory and the Defense Advanced Research Projects Agency (DARPA). He has also led the [L3Harris Institute for Assured Information](#) and the [Florida Tech Research Institute](#).

Inductees are selected based on outstanding research contributions and innovations with consequential impacts in science, engineering or medicine.

MEET CHIEF RESEARCH OFFICER AMY L. ADAMSON



[Amy L. Adamson](#) leads Florida Tech's research efforts as associate provost for research and chief research officer, focusing on advancing the university's research mission, including securing grants, partnerships and infrastructure that

give students opportunities for meaningful research.

She also supports faculty scholarship, helping bring cutting-edge knowledge and real-world problems into the classroom, while raising the university's research profile to strengthen the value of students' degrees and attract top faculty and collaborators.

With more than 25 years in higher education, Adamson has built her career around fostering

academic excellence, promoting research and expanding student access and success through high-impact practices. Her scholarly work has focused on the molecular interactions between Epstein-Barr virus and human cells, particularly how the virus triggers intracellular changes that can lead to metastasis. Her research has been supported by the National Institutes of Health, with an emphasis on training students in research.

Before joining Florida Tech, she served as a biology faculty member and associate dean for research for the College of Arts and Sciences at the University of North Carolina at Greensboro, where she helped drive growth in research and scholarship among faculty and students by expanding professional development opportunities and seed funding, contributing to a marked rise in external funding for the college. She also worked to promote and recognize student involvement in research, a key factor in academic and post-college success.

AIAA TEAM PARTICIPATES IN INTERNATIONAL AERO DESIGN COMPETITION FOR FIRST TIME



Florida Tech's [American Institute of Aeronautics and Astronautics \(AIAA\)](#) student chapter [competed](#) at the SAE Aero Design East competition, where the group's RC Plane Team flew a remote-controlled aircraft,

which members designed, built and named The Pink Panther, against teams from around the world.

This was the team's first appearance at the international event in Lakeland, Florida, in March. It was also many members' first time working with RC aircraft and aircraft design.

The event connected students with competitors from across the United States, Canada and Brazil and provided hands-on experience in aerodynamics, structures, manufacturing, computer-aided design (CAD) and electronics and systems integration, while strengthening teamwork and project management skills.



USCG AUXILIARY UNIVERSITY PROGRAM RECEIVES NATIONAL CHARTER

Florida Tech's [U.S. Coast Guard Auxiliary University Program](#) is officially on the map.

The Panther AUP received its [national charter](#) April 24 during a ceremony at [Mertens Marine Center](#), formally establishing it as a sanctioned U.S. Coast Guard Auxiliary University Program unit. The program is the first of its kind in Florida, one of only 18 nationwide and the largest in the Coast Guard's Southeast District.

Capt. Jason Aleksak, U.S. Coast Guard Sector Jacksonville commander, presented the charter certificate to Bill Cox, auxiliary unit liaison, and [Richard Aronson](#), head of Florida Tech's [Department of Ocean Engineering and Marine Sciences \(OEMS\)](#).

Established in partnership with OEMS, Panther AUP provides students a structured pathway to commissioned service with the U.S. Coast Guard, the National Oceanic and Atmospheric Administration Corps and other federal agencies. The program launched at the start of the 2024-2025 academic year with an inaugural class of 12 students.

"Florida Tech's nationally ranked science, engineering, aviation, medical and other academic programs are graduating exactly the talent our service needs," Cox said. "We're extremely proud to host the first USCG Auxiliary University Program in Florida."

KING NAMED FTRI EXECUTIVE DIRECTOR



[Michael King](#), an accomplished scientist with a strong record in biometrics, cyberidentity and computational psychology, has been appointed director of the [Florida Tech Research Institute \(FTRI\)](#).

King came to Florida Tech in 2015 as a research scientist at the [L3Harris Institute for Assured Information](#) and is now also professor in the [Department of Electrical Engineering and Computer Science](#). Before academia, he worked for more than a decade in the U.S. intelligence community as a scientific research and program management professional.

He succeeds professor [Marco Carvalho](#), who served as founding executive director and launched the institute.

"We honor Dr. Carvalho's distinguished contributions as he continues his service as professor and with his L3Harris Assured Information Endowed Professorship," Provost [John Z. Kiss](#) said.



STUDENT SHOWCASE WINNERS REFLECT INNOVATION, HANDS-ON LEARNING

Worms and Martian regolith. Spent brewer's yeast and proteins. Coronal mass ejections and seagrass.

Answers from a really challenging trivia night? Contents of the world's most interesting medicine cabinet? Possibly. But in fact, those odds and ends are just a few of the unique elements associated with Best-in-Show-winning projects at the [2026 Northrop Grumman Engineering and Science Student Design Showcase](#).

Florida Tech's annual presentation of jaw-dropping scholarship, from a brick-baking lunar rover to a colorful poster exploring whether adverse childhood experiences may erode trust in the U.S. court system, featured 232 projects: 120 from the [College of Engineering and Science](#); 103 from the [College of](#)

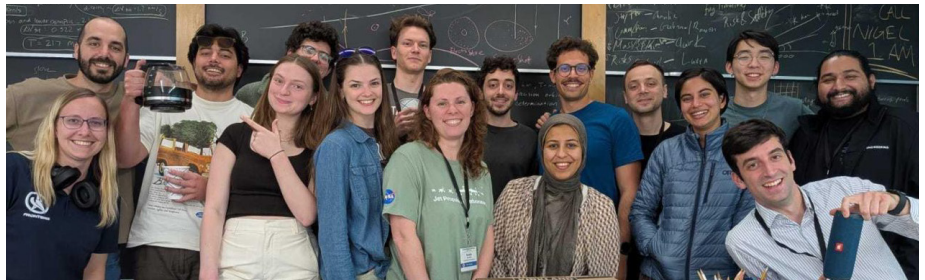
[Aeronautics](#); and nine from the [College of Psychology and Liberal Arts](#).

In their entirety, Florida Tech President [John Nicklow](#) said, the projects comprised one of the best showcases the school has held.

"This day makes me so proud of this institution and all of you," Nicklow said ahead of the awards presentations. "The showcase really does embody the essence of Florida Tech's educational mission.

Our students engage in project-based learning, gaining important insights into their disciplines."

Scan for the full list of showcase winners:



FLORIDA TECH STUDENT ON WINNING TEAM AT 2026 CALTECH SPACE CHALLENGE

Amelia Brumfield '24 M.S., an [aerospace engineering Ph.D. student](#), was on the winning team at the 2026 Caltech Space Challenge in March.

The five-day event welcomes 32 graduate students from the best universities in the world to the university's Pasadena campus to compete in designing a space mission.

More than 500 students applied this year, and the selected students—16 each on Team Voyager (Brumfield's team) and Team Explorer—came from schools including Georgia Tech, Stanford University, Imperial College London, Harvard University, Delft University of Technology and MIT, in addition to Florida Tech.

The teams each designed a mission to investigate the history of water and volatiles on retrograde comet P/2005 T4 (SWAN), then enter a minimum two-year elliptical orbit in Venus' upper atmosphere to study atmospheric loss and solar wind interactions.

Team Voyager's winning proposal was SEAHORSE (Spectroscopy for Escape in Venusian Atmosphere

and Hydrogen Outgassing in Retrograde SWAN Encounter).

"SEAHORSE proposed a comet flyby to characterize the nucleus, coma, tail and local dust-plasma environment, supported by two deployable probes (Fry-1 and Fry-2) to improve spatial sampling," Brumfield said. "Then, after the two-year minimum orbit around Venus, it would conduct a technology demonstration of air-breathing electric propulsion using Venus' atmosphere as the propellant."

Brumfield helped identify SEAHORSE's instrumentation suite, supported risk analysis and characterized the density and pressure of Venus' upper atmosphere.

During the week, team members collaborated with various experts from the Caltech-based Jet Propulsion Laboratory and industry through technical reviews and presentations.

"I gained insight into the various aspects of space mission design and experience working alongside a diverse group of graduate students and experts," Brumfield said.



STUDENTS EARN RECOGNITION ACROSS NATIONAL AND STATE CONFERENCES

[College of Engineering and Science](#) students earned recognition at several conferences this year, showcasing research across a range of disciplines.

At the [Florida Academy of Sciences 89th Annual Meeting](#) in March, which drew 281 attendees from 30 institutions and 189 [oral and poster presentations](#), Florida Tech students earned 20 of the 55 presentation awards, about 36%, along with one of eight travel grants.

Eight doctoral students, including five from the COES, represented Florida Tech at the [2026 Conference of Florida Graduate Schools](#), in April. Students Jessica Liaw, Juan Rodriguez Paez '24, Laura Fronchetti Guidugli '22 and Andy Walker '21 presented research spanning [cell and molecular biology](#), [biomedical engineering](#), [chemical engineering](#) and [biological sciences](#). [Computer engineering](#) Ph.D. student Ari Issitt '23 earned the People's Choice Award in the conference's Three Minute Thesis Competition for her presentation, "When looking good isn't good enough: Do rendering metrics predict perception?"

Ginger Chen '26 Ph.D. was selected to present at the 2026 International Space Development Conference in June. Chen presented her research paper, "[Astronauts!](#)"

[Cognitive Mapping: Evolving Identity through the Chronospatial Frontiers](#)," co-authored with associate professor [Joo Young Park](#), which draws on interviews with retired astronauts to examine how they define pivotal moments and self-identity. The work applies Chen's GOLDEN Framework for human-AI collaboration to build a model bridging Eastern philosophical strategy with Western cognitive science.

A group of Florida Tech faculty, students and alumni also traveled to Berlin for the 21st International Congress on Marine Corrosion and Fouling in July. Assistant professor [Kelli Hunsucker](#) '07 M.S., '13 Ph.D., served on the conference's scientific committee and delivered a keynote address. Assistant professor [Travis Hunsucker](#) '11 M.S., '16 Ph.D., participated in a panel discussion. Research assistant professor [Emily Ralston](#), Travis Hunsucker and Ph.D. students Dylan Eggers '23 M.S., Corbin Freeland '24, '26 M.S., and Geligne Franklin all presented research, along with alumni Kailey Richard '20 M.S., '25 Ph.D., and Kody Lieberman '13, '16 M.S. Ph.D. student Tenzin Yeshi '26 M.S., alumna Brittan Steffel '16, '19 M.S., and Kelli Hunsucker presented posters. Senior Heat Marley also attended.



ALL-FLORIDA-TECH CREW COMPLETES WEEKLONG SIMULATED MARS MISSION IN UTAH

For five (Martian) days in the Utah desert, a [team](#) of Florida Tech students lived as if they were already on Mars.

Operating under full Mars analog protocols at the Mars Desert Research Station, the six-member crew conducted research, completed spacewalk-style extravehicular activities and managed delayed communications simulating future human missions to Mars.

The mission also served as the pilot for Florida Tech's [Analog Research Program \(ARP\)](#), a new Student Life organization giving student

scholars interested in space research a platform to work in high-fidelity analog environments.

"This mission proved that the university can effectively support student scholars in realistic testing environments, establishing a new and permanent avenue for future space research," said Peyton Hay '26, mission commander and ARP founder.

In addition to Hay, the crew included Anna Weatherwax as GreenHab officer, McKenna Taylor '25, '25, and Allona Yehiav as crew scientists, River Riehle '26 as crew engineer, Ann Alor as health and

safety officer, and Sydney Deck as alternate and ground control.

Together, the students carried out four research projects on plant biology and satellite communications, completing 11 extravehicular activities under a 15-minute communication delay meant to mirror Mars conditions.

Several projects explored how plants and microbes might survive on Mars. Students collected soil samples near the station to study plant growth-promoting bacteria and whether microbes could adapt to lower-pressure environments. The team also tested Brassica rapa plants and low-pressure-treated pea seeds in simulated Martian regolith and local desert soils.

Riehle worked on satellite communications, downlinking and processing GOES-19 weather data to create graphics tracking weather system evolution. Deck, who trained with the crew but didn't travel to Utah, ran a daily survey measuring the psychological effects of isolation and the communication delay.

The mission closed out the research station's 2025-2026 season, giving students an immersive introduction to human space exploration.



Research Highlights

STUDENTS EARN PRESTIGIOUS NSF GRADUATE RESEARCH FELLOWSHIP

Four Florida Tech students have been awarded the [National Science Foundation Graduate Research Fellowship \(NSF GRF\)](#), a highly competitive honor that provides recipients with a \$37,000 annual stipend and a \$16,000 education allowance for three years. The program, established in 1952, has funded more than 70,000 researchers, including at least 40 future Nobel Prize recipients.

Russ Smith '25



Program: [Chemical engineering, Ph.D.](#)

Research: Extracting critical minerals and materials from unconventional sources—including electronic waste, biomass and coal waste

Advisor: Associate professor [Toufiq Reza](#)

Application: Addresses domestic supply chain concerns for minerals used in defense, alternative energy, automotive infrastructure and consumer electronics.

Emily Acampora '26



Program: [Biomedical engineering, Ph.D.](#)

Research: Identifying brain-based signals that could give physicians an objective measure of fibromyalgia, a chronic widespread pain condition that disproportionately affects women

Advisor: Assistant professor [Careesa Liu](#)

Application: Aims to shorten diagnostic delays for this condition, which lacks visible clinical markers because it stems from changes in how the nervous system processes sensory input.

Kaitlyn Dunn '26



Program: [Operations Research, M.S.](#)

Research: Developing machine learning algorithms that combine data from multiple medical imaging sources to improve cancer detection

Advisor: Professor [Nezamoddin Kachouie](#)

Application: Focuses particularly on low-dose radiation imaging, which is commonly used in rural and underserved hospitals, where image noise can obscure tumors that might otherwise be caught earlier. The algorithms are designed to assess tumor texture and help physicians identify high-risk patients and prioritize urgent care in emergency settings.

Quintin Peters

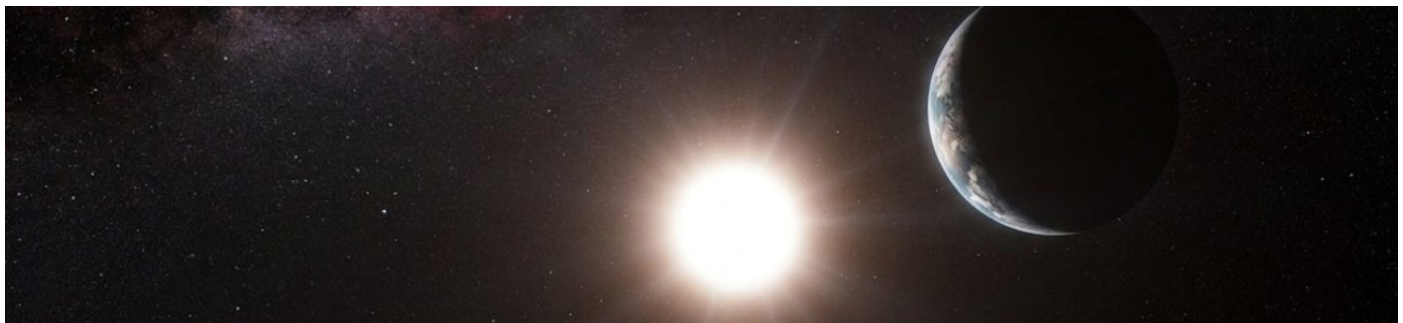


Program: Biomedical engineering, Ph.D.

Research: Using electroencephalography to study blink-related oscillations, the brain's processing of visual information during spontaneous blinking, and how concussions alter that process

Advisor: Assistant professor Careesa Liu

Application: Aims to create a standardized, objective measure of concussion severity and one day give clinicians a diagnostic tool for concussions comparable to an X-ray for a broken bone.



RARE TEENAGE PLANETARY SYSTEM ASSESSMENT DEEPENS COSMIC EVOLUTION UNDERSTANDING

Planetary systems take hundreds of millions of years to evolve, and because human history spans only a fraction of that time, astronomers have mostly observed planets either just after birth or long after they've settled into maturity. What happens in between has remained largely unknown—until now.

For the first time, researchers have closely examined a planetary system caught mid-transition. TOI-2076, discovered in 2020, offers a new window into that once-mysterious middle stage.

The findings, published in *Nature Astronomy* under the title "An Adolescent, Near-Resonant Planetary System Near the End of Photoevaporation," look at two signs of a system's adolescence: planets drifting apart after once orbiting closely together, and atmospheres stripped away by intense radiation from their star.

Assistant professor [Howard Chen](#), who builds computer models to study planetary evolution, [joined](#) researchers worldwide to see whether his models could reproduce this system's outcome when run from simulated starting conditions.

"The transformative period is so short compared to the entire lifespan of the system," Chen said. "That period is really the key in determining how it turns out at its mature state."

TOI-2076's four planets orbit a K-dwarf star roughly 210 million years old, young by cosmic standards. Data from ground-based telescopes and NASA's Transiting Exoplanet Survey Satellite showed the planets spaced in a pattern suggesting they once orbited tightly and are gradually spreading out. All four share similar rocky cores, but their atmospheres differ sharply: The innermost planet has lost its original gases entirely, while the outer three still hold onto theirs.

Chen attributes the pattern to photoevaporation, a process in which stellar radiation heats a planet's atmosphere until gas escapes, with planets closest to the star losing the most. Running his models with identical starting compositions for each planet, Chen found they naturally evolved into a state matching what astronomers observed, confirming photoevaporation as the likely cause and showing that mass loss from escaping gas also drove the planets' gradual separation.

"To see the model work in the real world and explain what's happening is pretty powerful," Chen said.

The simulation suggests most atmospheric loss happens within a system's first 100 million years, after which its structure stabilizes for billions of years. With this update, Chen's model could help astronomers trace the histories of older systems and predict how newly discovered young planets, including ones like those in our own solar system, will eventually mature.

MARINE PROBE WINS STUDENTS SECOND AT LOCAL HACKATHON



Three Florida Tech students helped their team earn [second place](#) and \$500 at the Space Coast Initiative: Hackathon 2026 this spring at Groundswell Startups in Melbourne.

Computer engineering Ph.D. student David Nieves-Acarón '22 and sophomores Nathan Perez Matos and Jean Garin helped Team Orion excel in the Tinkerers Track, which involves both software and hardware, such as the Internet of Things, robotics and embedded systems. Additional team members were Ryan Huttshell and Dominic Catania.

Their problem statement: "Understanding plankton behavior, distribution and health is essential for monitoring ocean ecosystems, yet collecting

high-resolution, long-term data on these microscopic organisms remains extremely difficult."

Over roughly two days, the team conceived, built and began testing a prototyped concept of what Nieves-Acarón described as a "simple yet cost-effective marine probe" capable of measuring and recording basic but important metrics for marine biology, including salinity levels and water temperature.

Team Orion was one of 18 Hackathon teams and, in addition to Florida Tech, participating students came from Eastern Florida State College, the University of Florida, the University of South Florida and the University of Central Florida.

DON'T BE FOOLED: DETECTING AND PREVENTING AI HALLUCINATIONS IN DIGITAL FORENSIC INVESTIGATIONS

By [Sneha Sudhakaran](#)



As generative artificial intelligence (AI) becomes increasingly common in cybersecurity, we need to be cautious and ensure that the widely used tools do not compromise the accuracy and integrity of our work.

While these technologies significantly improve efficiency and productivity, they also introduce a critical challenge: AI hallucination.

AI hallucination is when AI models generate plausible but incorrect, misleading or fabricated information. In digital forensics research, where evidence accuracy and integrity are essential for investigative conclusions and legal proceedings, hallucinated outputs can lead to digital artifact misinterpretation and, potentially, flawed investigative outcomes.

My research, conducted alongside a group of graduate students, focuses on understanding if generative AI models produce hallucinated responses during forensic research and how researchers can systematically validate the integrity of AI-generated outputs.

Specifically, the work examines how large language models (LLMs) interpret complex forensic artifacts, such as system logs, network traces, malware reports and memory analysis results. By analyzing these interactions, we identify scenarios in which generative AI models may infer unsupported conclusions or generate fabricated explanations that appear technically convincing but are not supported by actual evidence.

A central contribution of our research, we are developing educational frameworks and validation strategies that teach researchers and students how to critically evaluate generative AI outputs.

Instead of treating AI responses as authoritative answers, our work also promotes a methodology in which AI-generated explanations are cross-checked with forensic artifacts, verified against trusted sources and analyzed using structured reasoning. This approach emphasizes the importance of evidence-based validation when integrating AI into forensic workflows.

Another key aspect of my AI-related research involves effective prompt design and research literacy. Because generative AI models respond heavily to how questions are framed, poorly constructed prompts can lead to incomplete or hallucinated responses.

My work explores how investigators can craft structured prompts that guide AI systems toward more reliable outputs while minimizing ambiguity.

In addition, I emphasize the importance of research reading and verification, encouraging users to compare AI responses with peer-reviewed research, technical documentation and established forensic methodologies.

The International Conference on Cyber Warfare and Security (ICCCWS) recently published work I conducted with Naresh Kshetri, a faculty member at Rochester Institute of Technology, about how forensic research requires this kind of hybrid model (human plus AI) for accurate research.

This combination of prompt engineering and critical research evaluation helps reduce the risk of blindly trusting AI-generated explanations.



FLORIDA TECH GRAD'S CODE NOW IN USE BY SPACE FORCE

Near Kennedy Space Center's Launch Complex 39, Zachary Kopel '26 is working to give forecasters a better tool for predicting microbursts, sudden downdrafts capable of producing winds as strong as an EF-1 tornado.

"Microbursts can commonly have winds of 30 knots or greater," Kopel said in an interview with Spectrum News 13. "Sometimes up to EF-1 tornado level winds, which is about 80 to 90 miles an hour."

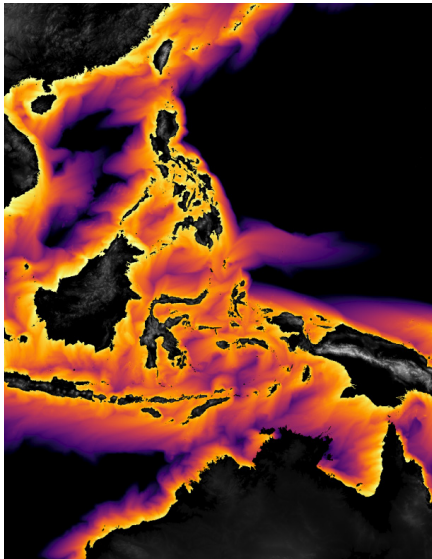
Wind gusts of that strength can damage a rocket's navigation systems, a concern for forecasters at the 45th Weather Squadron, especially when a rocket is exposed while being moved from the Vehicle Assembly Building to the launchpad.

Kopel's approach relies on a weather balloon and a short piece of computer code. As the balloon rises, it collects readings on temperature, pressure and dew point, which the code uses to calculate storm-risk indices. The program then generates a number, with higher values signaling a greater chance of a microburst that day.

Two years into development, the tool has [performed well](#): Out of 31 recorded events, it missed only one and produced three false alarms. It runs in seconds on Kopel's personal laptop, without any need for outside computing power.

Kopel presented the program to the United States Space Force in May, and the branch is now moving to adopt it, a milestone he said made the setbacks worthwhile.

Looking ahead, Kopel wants to refine the code further by incorporating additional weather data and machine learning. He said adding radar data, which would allow the program to track storms' location and movement rather than just atmospheric conditions, is the logical next step.



FLORIDA TECH ADVANCES COMMUNITY CLIMATE RESILIENCE THROUGH RESEARCH AND STUDENT ENGAGEMENT

Researchers from Florida Tech's [Center for Resilience Science](#) are partnering with the U.S. Department of Energy's Argonne National Laboratory and local nonprofit, Little Growers, to help coastal communities prepare for the challenges related to climate through the Space Coast RESCUE (REsilience Solutions for Climate, Urbanization, and Environment) project. Led by professor [Steven Lazarus](#), the interdisciplinary initiative brings together faculty, students, community organizations and national laboratory partners to develop science-based solutions that strengthen resilience to climate, urbanization and environmental change across the Space Coast.

Within the project, associate professor [Hamidreza Najafi](#) leads the Building Energy research thrust, which focuses on improving the energy efficiency and resilience of homes and buildings through advanced modeling, future climate analysis and community engagement. As part of this effort, Najafi and [mechanical engineering Ph.D.](#) student Muhammed Salih developed an interactive residential energy audit tool and trained local high school students to conduct home energy assessments. Working alongside mentors from Florida Tech and Little Growers, the students evaluated homes in an underserved Melbourne neighborhood and provided participating families with personalized recommendations to improve energy efficiency, increase indoor comfort and reduce utility costs.

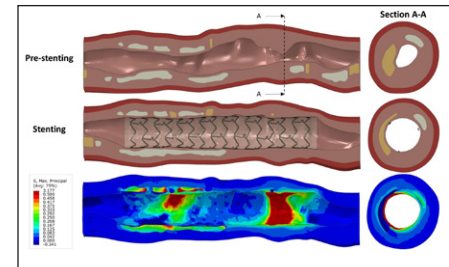
The residential energy audits are one component of a broader research program that integrates future weather and climate projections, building energy simulations, drone-based thermal imaging and community science to evaluate how rising temperatures, urban heat islands, flooding and other climate-related hazards may affect neighborhoods in the future. By combining cutting-edge research with hands-on STEM education and community partnerships, the project is helping identify practical adaptation strategies while preparing the next generation of engineers and scientists to address real-world resilience challenges.

ASME HONORS FLORIDA TECH RESEARCHERS FOR STENTING SAFETY STUDY

Jose Colmenarez '26 Ph.D. and his co-authors, including professor [Linxia Gu](#) and assistant professor [Pengfei Dong](#), have been recognized by the American Society of Mechanical Engineers for their research paper, "[Evaluating the Influence of Morphological Features on the Vulnerability of Lipid-Rich Plaques During Stenting](#)," published in the *ASME Journal of Biomechanical Engineering*.

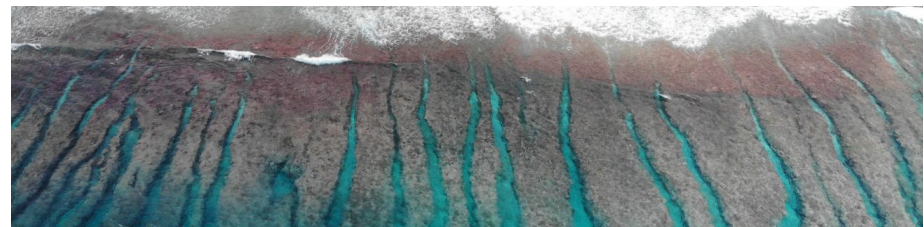
The paper was named an Editors' Choice selection and was one of 18 papers nominated for the 2026 Richard Skalak Award.

The research examines how lipid deposits in arteries respond to stent deployment, identifying which plaque characteristics raise the risk of rupture during the procedure, a complication that can lead to serious downstream health issues even when a stent placement is otherwise successful. Heart disease and lipid buildup in arteries account for a large share of illness and death worldwide, underscoring the need for better diagnostic and treatment tools. While stent deployment has become a standard solution for these conditions, complications can still arise without proper pre-planning and optimization. Colmenarez and his team pursued this work with the goal of supporting



clinical decision-making and guiding intervention planning.

Using a three-dimensional model built from a real patient's artery imaging, along with a broader analysis of thousands of simulated plaque geometries, the team found that factors like the extent of arterial narrowing and the angular spread of the lipid core play a bigger role in predicting rupture risk during stenting than the thickness of the fibrous cap, long considered the primary indicator in the field. The findings suggest that stent-related complications may be better predicted by accounting for a wider range of plaque characteristics rather than relying on a single measurement.



RESEARCHERS REVEAL KEYS TO CORAL REEF SURVIVAL

Two new studies from Florida Tech's Institute for Global Ecology are deepening scientists' understanding of how coral reefs respond to climate change and how to protect them.

A [study](#) led by Ph.D. candidate Andrew Walker '21, co-authored by professor [Robert van Woesik](#), Institute for Global Ecology director, and published in *Communications Earth & Environment*, examined climate refugia, locations where conditions favor coral survival despite rising ocean temperatures, and marine heatwaves, extended periods of abnormally warm water.

Walker and van Woesik mapped marine heatwave impacts alongside local disturbances globally and evaluated several reef types hypothesized to serve as refugia. Turbid reefs, murkier, nearshore waters often overlooked for their lack of visual appeal, showed the strongest potential to serve as these safe havens. But that same nearshore location leaves them more exposed to threats like sewage discharge, fertilizer runoff and overfishing, which can suppress their potential as refugia.

"Reducing the impacts of local disturbances on these reefs can provide corals with more climate refugia than researchers had previously anticipated," van Woesik said.

A [separate study](#), led by Ph.D. candidate Tonya Macedo '22 M.S., co-authored by van Woesik and

published in *PLOS One*, looked to the past for clues about the future. Analyzing 1,890 geologic reef cores spanning the past 12,000 years, Macedo and van Woesik found reefs grew fastest when sea-surface temperatures ranged from 75.2–77 degrees Fahrenheit and carbon dioxide levels measured around 325 parts per million. As carbon dioxide rose and oceans warmed beyond that range, reef growth slowed.

Today's average sea-surface temperatures, around 82.4 degrees Fahrenheit in many regions, suggest corals have adapted to warmer waters over thousands of years. But current temperatures are pushing reefs near the upper limits of that capacity.

"There is concern for coral reefs as marine heatwaves cause mortality on present-day reefs," van Woesik said. "Intense and repeated marine heatwaves, high mortality rates and slow recovery rates reduce the capacity for the reef to grow fast enough to keep up with a rising sea level."

Together, the studies point to a shared conclusion: Coral reefs' ability to keep pace with rising seas is strained not just by climate change, but by local human activity. Reefs that grow too slowly risk falling behind, weakening their ability to protect shorelines. Research says curbing local disturbances could buy reefs time as conditions shift.

Practically Ambitious

New dean brings vision for 'enduring and sustainable' evolution of the COES.

By Adam Lowenstein

It probably didn't matter that it was a telescope a young **Sambandamurthy Ganapathy** was tasked with repairing over the course of his weekly hands-on practicum shifts at a physics lab at The American College in Madurai, India.

What mattered for the first-year student, what surprisingly and wonderfully helped illuminate an exciting academic path forward, was the process and the results.

It took weeks to order and receive parts to repair the telescopes, to work on them with a faculty mentor helping to guide Ganapathy and several other students. But eventually, it was time to try them out.

On the roof above the physics lab, Ganapathy peered through his repaired telescope and saw stars and planets—and his future.

"To be able to do something, and then you succeed and after that, you have an outcome that leaves a lasting impact—that's one of the moments where I felt connected to doing something with my hands and seeing the results," Ganapathy says.

In the years since his telescope eureka moment, Ganapathy went on to earn his Ph.D. in quantum materials and build a distinguished career, now into its third decade, as an academic leader, teacher, physicist and researcher focused on materials engineering.

As he was with that telescope and even as a child, Ganapathy remains a tinkerer. But his days of using screwdrivers and soldering guns have long passed. Now, his tools might include a beam of light, and his work may be with microscopic dabs of material to which he adds even smaller amounts of a different material.

That addition can dramatically alter the original material's properties, a seismic change at an atomic level. Understanding what additions—and sometimes,

subtractions—bring out which properties is critical.

"What fascinated me was materials that show very dramatic properties with very tiny changes," he says.

As he begins as dean of the [College of Engineering and Science](#), Ganapathy will again be exploring the impact of additions and choices.

His tenure starts with listening.

"I'm coming into a community that I know is doing really well, but I would like to listen to people and then understand what their ambitions and aspirations are," he says. "I see the dean's role to be someone who provides an environment that enables people to succeed—our students, our faculty, our staff, everyone."

"My goal is to make sure that we create a positive environment by listening to people and providing an environment where they can thrive and do what they are best at doing."

'Leadership Journey'

Collaboration has guided Ganapathy as a researcher and academic leader.

"Increasingly, the world is going into research that's collaborative," Ganapathy says. "And that's what I've been doing as an academic leader on my leadership journey—working in very collaborative ways."

He also sees the value and power of collaboration as an administrator.

The Space Coast can be a partnership bonanza, with space, defense, aerospace, advanced manufacturing and other key sectors represented. Coupled with what Ganapathy describes as "Florida Tech's DNA in the space program," that rich array of actual and potential partners was appealing as he considered the opportunity to lead the COES.

"So, I thought that the spirit of exploration and innovation that comes from an academic institution, as well as from industry in the same area—I thought that was a very attractive thing," he says.

"I see that the future belongs to an institution that would actually bring together the talent, ideas, partnerships and opportunities for all of us. I think that's where the institution would thrive."

Ambitious and Practical

The curiosity that fuels Ganapathy's scholarship is welcome in his leadership role, as well. Ambition is useful, too, as it urges us toward challenges to be solved, he believes.

In leaders, however, those drives must be tempered with two notions, Ganapathy says: what is practically possible and what is impactful immediately.

"The balance is what defines good leaders in my view," he says. "A leader has to have the balance of being ambitious, as well as practical."

Put another way, the balance is about tackling far-ranging challenges and more immediate ones, but not losing sight of strengthening and evolving the systems that make the college and university successful.

"Be curious; be ambitious; and be practical in achieving those ambitions, so that we build structures and research and education programs that are enduring and sustainable," Ganapathy says.

Ganapathy sees his role as dean as providing an environment that enables the "extremely talented people" on campus to succeed, whether students, faculty or staff.

"At the end of the day, the dean's role or provost or any one of those academic leadership roles—we are service roles, right? We serve the institution; we serve the faculty; we serve our students; we

“

Be curious, be ambitious,
and be practical in
achieving those ambitions,
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programs that are enduring
and sustainable.

”

serve our community partners; and alumni and our staff,” he says.

“So, as a service, we need to be as accessible and transparent, and also as communicative, as we can. And when we achieve all of that, I think, we would take the institution forward, both in research as well as in the leadership.”

He concludes, “The ideal goal is to make sure that our students, when they graduate, are successful.”

Building Community

This is Ganapathy’s second stint living in the Sunshine State. Exactly 20 years ago, he spent more than two years in Tallahassee as a postdoc working at the National High Magnetic Field Laboratory.

Since then, he has lived in places such as Buffalo, New York, where cold temperatures are the dominant extreme weather, not raging heat. But he, his wife and his two daughters see those extremes as part of the overall package of living in a community—and of life.

“Every place has its beautiful days and not so beautiful days. That’s part of life,” he says.

Far more important to the vibe and comfort of a place are the people, Ganapathy says. They lend an area its spirit. And in Buffalo, that tapestry included his role on the boards of multiple community groups and his family’s engagement in cultural and volunteer activities.

“We love to make friends, and we love to contribute to the community,” he says. “And I think we’re looking forward to that in Florida, as well.”



Making Moves



WELCOME TO OUR NEWEST COLLEGE OF ENGINEERING AND SCIENCE FACULTY MEMBERS:

Pictured from Left:

Ouayl Chadli, assistant professor, MSE
Aranyak Acharyya, assistant professor, MSE
Xuedong Zhai, assistant professor, APSS
Meredith Sutton, assistant professor, MCE
Yong Han, assistant professor, BES
Amy Adamson, associate provost for research and chief research officer
Kazi Khoda, assistant professor, CCE
Murthy Ganapathy, dean and professor, COES
Guillermo Mazzilli, assistant professor, APSS
Ananth Vedururu Srinivas, visiting instructor, MSE
Tyler Hanks, assistant professor, EECS

Not Pictured:

Bishnu Bhusal, assistant professor, EECS
Mohammad Farmani, assistant professor, EECS
Hadi Wiputra, assistant professor, BES

A+ Accolades

FTRI EARNS CYBERSECURITY CERTIFICATION

The Florida Tech Research Institute (FTRI) has successfully completed a Cybersecurity Maturity Model Certification assessment, reinforcing the university's commitment to protecting sensitive research information and maintaining strong cybersecurity capabilities in support of sponsored research.

The milestone was achieved through a combined effort between the FTRI and Florida Tech's information technology team. The certification positions the university to pursue additional federally funded research requiring advanced cybersecurity compliance.

And the Award Goes to ...

1. Kenna Peters '26 and Kelsey Fox

Dr. Richard Lincoln Turner Endowed Research Fund in Biological Sciences Fellowship

The Dr. Richard Lincoln Turner Endowed Research Fund in Biological Sciences fellowship awardees for 2025-2026 are Kenna Peters '26 and Kelsey Fox. They each received a Grant-in-aid of Undergraduate Research in Biological Sciences of \$1,658 for their research projects.

The fund supports undergraduate research in organismal, cell or molecular biology.

Peters, a [marine biology master's](#) student with a bachelor's degree in [marine conservation](#), tested whether DNA from shark jaw cartilage can be used to identify the species the jaws belonged to.

Fox, a senior double majoring in [genomics and molecular genetics](#) and [marine biology](#), is conducting research on how genetic differences influence an organism's response to environmental toxicants.

2. Abigail Hesterhagen

Kerry Bruce Clark Endowed Scholarship

[Marine biology](#) major Abby Hesterhagen has been named the [2026-2027 recipient](#) of the [Dr. Kerry Bruce Clark Endowed Scholarship in Marine Biology](#).

Hesterhagen was selected by the [Department of Ocean Engineering and Marine Sciences](#) based on her academic achievement, research experience and campus involvement. The selection committee cited her strong academic performance, undergraduate research experience, active involvement in campus and professional organizations and clear vision for her academic and career goals.

"I am extremely honored to have been selected for this scholarship," Hesterhagen said. "I plan to use this award to pursue a career that will benefit the ocean and the life it contains. As a recipient, I hope to honor Dr. Kerry Clark through my education, research and future career."

Hesterhagen works in the research laboratory of renowned shark biologist and associate professor [Toby Daly-Engel](#), studying shark behavior and population dynamics using genetic tools.

3. Michael King

Charles E. Helmstetter Award for Excellence in Research

Professor [Michael King](#) was awarded the [Charles E. Helmstetter Award for Excellence in Research](#). The award honors faculty who demonstrate outstanding research achievement.

King leads an internationally recognized research program on the accuracy, fairness and responsible use of automated face-recognition systems, supported by more than \$12 million in funding and extensive publications and presentations involving his students, and he is director of the Florida Tech Research Institute (FTRI).



4. Abdullah Aydeger, Xiang He and Soheil Saedi

NSF CAREER Award

Assistant professors [Abdullah Aydeger](#), [Xiang He](#) and [Soheil Saedi](#) were each awarded the National Science Foundation (NSF) CAREER Award.

The NSF CAREER Award supports early-career researchers who show strong potential to become academic leaders by integrating cutting-edge research with education and outreach.

Aydeger's project, "Post-Quantum Security and Identity Foundations for Adaptive 6G Infrastructure," focuses on building secure and adaptive communication foundations for next-generation networks, with an emphasis on quantum-resilient protocols and identity management.

His project, "Understand and Regulate Surface Segregation of High-Entropy Oxides for Enhanced Catalysis," integrates computational and experimental approaches to understand and control the surface behavior of high-entropy oxides. The work aims to enable more effective electrocatalysts for energy-conversion and other advanced applications.

Saedi's project, "Empirical Design and Precipitation Hardening Pathways in High-Temperature High-Entropy Shape Memory Alloys," combines alloy-design principles, machine learning, thermomechanical testing and advanced materials characterization to develop high-entropy shape memory alloys capable of reliable operation at elevated temperatures. The work could contribute to next-generation materials for high-temperature actuation and resilient systems in aerospace, energy and industrial applications.

Each project also integrates research, education and student training, creating new opportunities for undergraduate and graduate students and helping prepare the next generation of researchers.

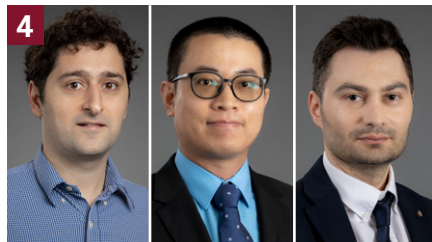
5. Naveed Mahmud

Best Paper Award

Assistant professor [Naveed Mahmud](#) received the [best paper award](#) at the Applied Quantum Computing and Quantum Circuits and Systems Workshop during the 19th Institute of Electrical and Electronics Engineers (IEEE) Dallas Circuits and Systems Conference in April at Southern Methodist University in Dallas.

[Systems engineering Ph.D.](#) student Piyush Sonawane '24 M.S. served as first author and presented the work at the conference. Andrew Kelly '25, a [computer engineering master's](#) student, was second author.

Mahmud's paper, "Latency Characterization of Quantum-Classical Workflows on an Embedded System-on-Chip," examines a core challenge in quantum computing: As hybrid quantum-classical algorithms process heavier workloads, the communication delays between quantum and classical systems become a significant bottleneck.



Mahmud and his co-authors characterized those latencies using a cost-effective embedded system-on-chip communicating with a quantum processor, producing what the researchers describe as a performance blueprint for future low-latency system design and integration with utility-scale quantum computers.

6. Duncan Stanley

IMG Student Journey Scholarship

[Civil engineering](#) major Duncan Stanley is the International Medical Group's (IMG) [Student Journey Scholarship](#) spring 2026 recipient.

The \$5,000 national scholarship, awarded to one recipient in the spring and one in the fall, is designed to support international students in U.S. higher education.

Stanley, who is from Jamaica, drew inspiration from his father and his late grandfather, both of whom worked in construction. When his grandfather passed away, Stanley committed to pursuing civil engineering to honor his legacy.

"Receiving this scholarship means a great deal to me and my family," Stanley told IMG. "It not only helps ease the financial burden of studying abroad, but it also reinforces my commitment to making the most of this opportunity and giving back to my community in Jamaica."

7. Jose Colmenarez '26 Ph.D.

VIAS3D Poster Competition Award

[Biomedical engineering](#) alumnus Jose Colmenarez '26 Ph.D. was awarded the VIAS3D Poster Competition Award at the 2026 SIMULIA Americas Users Conference in May in Novi, Michigan, for his poster, "A Finite-Strain Phase-Field Approach for Calcification Fracture in Diseased Arteries."

His work developed a computational framework to simulate crack initiation and propagation in calcified arteries, tackling a problem at the intersection of engineering and cardiology: To heal a heart, sometimes you first have to break it.

In mechanical engineering, breaking and fracture are usually signs of failure. But for people with coronary artery disease, a crack just a fraction of a millimeter long can make the difference in recovery. Under-expansion of calcified plaques remains one of the most common complications in coronary revascularization procedures. While physicians often view calcium fracture as a desirable outcome during treatment, to an engineer, it represents a complex mechanics problem, one where predicting when, where and how a fracture will occur requires accurate constitutive models, fracture mechanics and advanced numerical methods.

That challenge led Colmenarez to develop an explicit finite-element phase-field framework capable of simulating crack initiation and propagation in calcified tissue. His approach represents fracture as a continuous field variable that evolves alongside stress and strain fields, allowing cracks to emerge naturally without predefined paths or mesh discontinuities, producing simulations that trace evolving patterns as the fracture mechanics play out.



**College of Engineering
and Science**

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



ARONSON, BUSH LEAD ALUMNI STUDY TOUR TO BRAZIL'S PANTANAL

Professors [Richard Aronson](#) and [Mark Bush](#) led 18 Florida Tech alumni and friends on a journey to the Pantanal region in western Brazil.

This massive wetland—20 times the size of the Everglades—supports an abundance and diversity of wildlife, and the group saw many of the region's famous and charismatic denizens during the eight-day Alumni Study Tour II from July 8–16: giant river otters, capybaras, howler monkeys, hyacinth macaws and jaguars.

"The Pantanal is first and foremost the best place on the planet to see jaguars, and we saw a lot of them stomping around, hunting, swimming, grooming themselves and, generally, acting like domestic kitty cats—only a lot larger and with much bigger teeth!" Aronson said.

A day after flying into Cuiabá, Brazil, the group headed 85 miles southwest to Aras Eco Lodge, where hiking, canoeing, safaris and more awaited. The final few days of the trip were at the Hotel Santa Rosa, where travelers experienced boat rides to see the wildlife at the confluence of the Cuiabá, Piquiri and Tres Irmãos rivers.