Florida Tech IIIA



ONE BIG QUESTION

"HOW IS 21ST-CENTURY MANUFACTURING CHANGING?" P. 14



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GO GREEN, GET ONLINE! Find expanded coverage.

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COVER PHOTO: T. Dwayne and Mary Helen McCay stand in the new Digital Scholarship Lab of the Evans Library. T. Dwayne McCay assumes the Florida Tech presidency July 1. *Photo by Dominic Agostini*

Dedication of the Florida Tech mural in Downtown Melbourne took place May 19. Part of Melbourne Main Street's downtown mural project, the mural features Florida Tech's athletic mascot tearing its way through land, sea, sky and space alongside the university motto "Ad Astra Per Scientiam," or "to the stars through science." The mural, painted by artist Christopher Maslow, adorns the western wall of The Baby Patch building, at the corner of New Haven Avenue and Waverly Place.

Florida Tech TODAY

http://today.fit.edu

Florida Institute of Technology PRESIDENT AND CHIEF EXECUTIVE OFFICER

Anthony James Catanese, Ph.D., FAICP EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER

T. Dwayne McCay, Ph.D.

VICE PRESIDENT FOR MARKETING AND COMMUNICATIONS

Wes Sumner

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MANAGING EDITOR/ART DIRECTOR Judi Tintera, jtintera@fit.edu
EDITOR Christena Callahan '07 M.S., ccallaha@fit.edu
CONTRIBUTING WRITERS Stephanie Bacon, Christena Callahan,

Jameson Carter, Rolanda Hatcher-Gallop, Shelley Preston, Sara Smith, Wes Sumner, Bob Taylor

PRODUCTION Rob Gribbroek, Kristie Kwong WEB LAYOUT Christena Callahan, David Smith

CIRCULATION Ali Faisal

PHOTOGRAPHY Dominic Agostini, Malcolm Denemark/ Florida Today, Richard Flutie, Mike Parsons, Ryan Seeloff, Amanda Stratford

Alumni Office

VICE PRESIDENT FOR ALUMNI RELATIONS

AND EXECUTIVE DIRECTOR, ALUMNI ASSOCIATION

Bino Campanini '90, '92 MBA 321-674-8434, bcampanini@fit.edu ASSOCIATE DIRECTOR Stephanie Bacon

321-674-7198, sbacon@fit.edu
ALUMNI ENGAGEMENT OFFICER Stevie Pursell '12 MBA

321-674-6826, spursell@fit.edu

Have a Story Idea?

Email fltechtoday@fit.edu

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PRESIDENT'S PERSPECTIVE



Dear Florida Tech Alumni and Friends,

This spring, we concluded our Create The Future capital campaign. It has certainly been a highlight of my tenure as your president, and a "final report" on this very successful effort appears in this issue of *Florida Tech Today*. Simply put, we shattered university fundraising records and set a new high for Space Coast philanthropy, raising \$123.4 million.

This campaign exemplifies what the last 14 years have been about for me: finding new ways to exceed expectations,

to "make no small plans." Big ideas and higher expectations have been integral to what we have achieved ... together.

Nearly 60 years ago, this university was founded by people who dreamed of doing something new—of making contributions to society, and particularly the space program, in ways that had been previously unconsidered. That bold thinking helped bring us to where we are today.

It's been my pleasure and privilege to continue that work. "High tech with a human touch" has been all about creating an environment where students and professors work together to do new things, learn new things and make greater contributions to our shared future. That kind of approach is critical to making big ideas a reality.

Thank you for your partnership. Thank you for your collaboration. Thank you for proving once again that when we work together, there's nothing we cannot accomplish.

I know we'll see each other again soon. But until then ... go Panthers!

Sincerely yours,

A.J. Catanese, Ph.D., FAICP President & Chief Executive Officer

President Catanese stands with muralist Christopher Maslow and Pete in Downtown Melbourne to dedicate a new Panther mural, a gift of art to the community.



President Catanese inspects student design projects at the Northrop Grumman Engineering & Science Student Design Showcase this spring.

The Commencement crowd stands as President and Mrs. Catanese march out of their final ceremony as Florida Tech's first family, May 7, in the Clemente Center.



Feedback From Our Readers

We welcome your input on the magazine. Have a comment about something you've read? Want to share a memory about your FIT days? Email us at fitechtoday@fit.edu.

COLLEGE PLAYERS: THEN & NOW

"Top row, left side, is me! College Players was just a small organization of theatre kids in a sea of engineers (ok, some of us were engineering majors too!). This float was part of our set from the first musical we did, "Grease"! What good times we had. The best part? We're all still connected on Facebook and reminisce often.

My husband **WAYNE SANFORD** '91 was part of College Players too before he graduated and we married in 1994. Thanks for a great memory!"

—Helene Blake Sanford '92



"Do we remember? Facebook was all a flutter with memories of this float by those of us who were on it or helped build it. In the spring of 1992, College Players performed the musical "Grease." Taking place in 1959, a year after Florida Tech was founded, "Grease" fit in perfectly with Homecoming's theme of "Then and Now."

Pictured in the front row: JOHN ALMASI, MARIAN (SULLIVAN) BILLS, MATT FILLINGIM, KIM BURT, UNIDENTIFIED COLLEGE PLAYER, LISA TUROCY and AMY (JUCHEM) KLOPPER.

Back row: **HELENE (BLAKE) SANFORD** (who alerted us to this picture before our issues arrived), **DOUG GRANDEY** and **LYDA (ACKER) AZELTON**.

Not visible: Fun House Shake Shack shakers **ANGELO SCUDERI JR.** and **GREG PRAINO** as well as the mystery driver and passenger.

Another "Then and Now:" to see how I've changed, see page 34 of the Winter 2016 issue where I'm posing with my wife, **MICHELLE** ('97), and **BINO** at the San Francisco alumni reception."

---Matt Fillingim '95, '97

HOMECOMING 1980

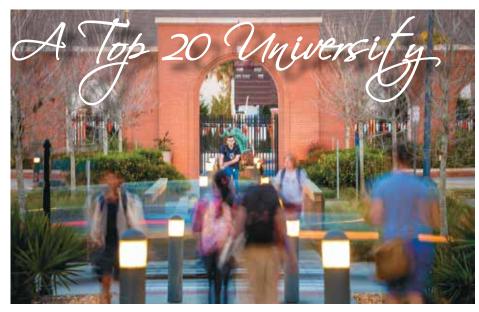
While cleaning out her desk, **CAROLE** (**SURPLUS**) **ESTES** '83 came across her winter 2015 issue of *Florida Tech Today* magazine. She writes:

"The event was the Lambda Chi Alpha Casino night in 1981. I'm the gal in the picture. The guy to my left is **BILL MCCORMICK** '83. The dealer in front of us is **MERRILL THRASH** '83."



BALDA FAMILY FOUNDATION BELIEVES IN HIGHER EDUCATION

Believing that higher education is a stepping stone to a better life, the Balda Family Foundation has supported more than 130 Florida Tech students through scholarship grants totalling nearly \$100,000 over the last eight years. The Balda Family Foundation celebrates the life of Ricardo Balda, a first generation college graduate who immigrated to America from Ecuador. For him, education was the platform for achievement in life. Today, his children Rick Balda, Kathy Mills, Tony Balda, Dan Balda and daughter-inlaw Sarah Balda honor their father's legacy through the foundation's long-standing relationship with Florida Tech. Their mission is to provide educational opportunities and scholarships to academically promising youth from Brevard County. Recently, members of the family gathered for lunch on campus to meet this year's recipients of the Balda Family Foundation scholarships at Florida Tech. The scholarships are matched by funds from Florida Tech's financial aid funds, which doubles their impact.



Florida Tech has been named one of the world's 20 best small universities by Times Higher Education of London. The 2016 listing features only five U.S. institutions, including prestigious California Institute of Technology.

"This ranking sheds light on a singular perspective of higher education institutions that might easily be overlooked," said Phil Baty, editor of this and other THE World Ranking lists. "The fact that CalTech tops this ranking as well as the overall World University Ranking reveals that there is something very powerful about scale and focus, when it comes to university performance."

Several students at Florida Tech wrote about their experiences at the request of Times Higher Education, touching on how smaller classes, improved access to faculty and an overall environment of inclusion among one of the nation's most diverse student bodies make their education unique and powerful.

That is by design, said president and CEO

ANTHONY J. CATANESE.

"Though Florida
Tech has grown steadily
over the years, we
understand how having
more focused classroom
and campus engagements can strengthen
both educational
outcomes and student
experiences," Catanese
said. "We are pleased
our practices have once
again placed Florida
Tech among the best
universities in the world."



Focus on the First Amendment

This spring marked Florida
Tech's fifth annual celebration
of the First Amendment,
Free Speech Day, hosted by
the student-run newspaper
The Crimson. The event
highlighted First Amendment
freedoms through a student
demonstration, a free-speech
wall and a keynote address by

First Amendment scholar David L. Hudson Jr., of Vanderbilt University School of Law.

Ted Petersen, assistant professor of communication and advisor to *The Crimson*, said the event accomplished its goal of reminding students of the importance of a vibrant free press and a dynamic free

exchange of ideas. It also promoted *The Crimson* as a free press on campus.

"No one censors *The Crimson*. Not me. Not Dr. Taylor. Not President Catanese. I think the students need to know that and embrace that,"

Petersen said.

Maul Named Medalist by Florida Academy of Sciences

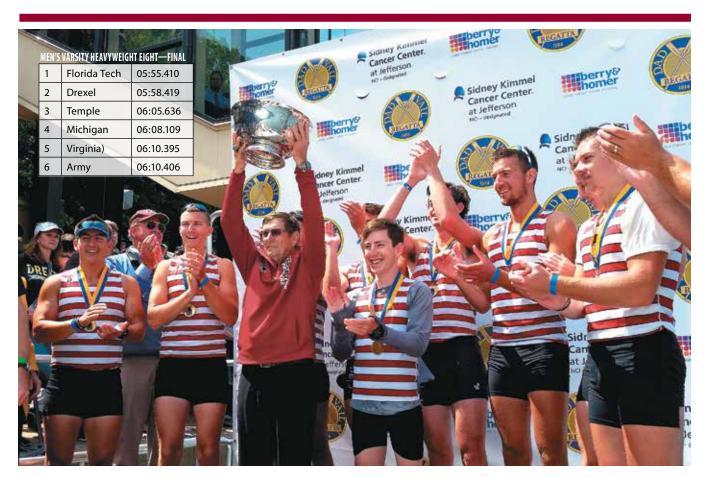
GEORGE MAUL, Florida Tech's distinguished professor of oceanography and the head of the department of marine and environmental systems from 1994–2014, has been named 2016 Medalist by the Florida Academy of Sciences.

He joins **TERRY OSWALT** (2010) and **JOHN TREFRY** (2002) as just the third Florida Tech faculty member since the academy started awarding the medal in 1963 to receive one of Florida's highest academic honors.

The Florida Academy of Sciences awards one medal annually to a Florida resident who has "contributed in an outstanding manner to the promotion of scientific research, to the stimulation of interest in the sciences, or to the diffusion of scientific knowledge." Candidates may be research scientists, philanthropists and educators, journalists, science fair coordinators or members of industry, government or other organizations.



George Maul



Panthers Repeat as Champions at Dad Vail

After earning its first Dad Vail Regatta championship in 27 years by the slimmest of margins a year ago, Florida Tech took a little bit of the suspense out of the 2016 version of the legendary race, overtaking Drexel by nearly a full boat length to claim the Richard O'Brien Trophy for a second consecutive year.

The varsity eight boat of Aaron Evans, Nicola Selakovic, Matas Lukosevicius, Josep Babinac, Kevin Coyle, Andrew Konecny, Ljubomir Gavric, Phil Machen and Kristjan Markovc completed the course in 5:55.41, just under three seconds ahead of the Dragons. Temple snagged the bronze medal.

T. Dwayne McCay, executive vice president and chief operating officer, celebrates with the winners of the varsity heavyweight eight championship.

Archive Grows with NASA Nostalgia

Former NASA engineer Scott Frisch '78, of Fort Lauderdale, recently donated a collection of space history materials to the Evans Library, establishing the Scott Frisch Special Collection.

The collection includes technical manuals authored by Frisch, NASA memorabilia and interior photos of shuttles, among other items.

"After watching the first moon landing on television, I developed an insatiable thirst for knowledge about space exploration and its technology," said Frisch. "Before ultimately attending Florida Tech, I had amassed a sizable collection of public domain literature about past and future space programs from many organizations."

"I am donating my collection and other papers from my early life achievements in the hopes that future Florida Tech graduates can be equally inspired to success based on the historical significance of our space programs' beginnings," he said.

His generosity is already making an impact.

Delroy Rebello, a graduate student in electrical engineering, is the Scott Frisch Scholar, a college roll position funded by Frisch to organize and inventory the collection. Rebello

said the collection holds great value for aerospace, electrical and mechanical engineering students, who can review documentation about various NASA rocket engines (1959–84), including architecture and telemetry.

"One of the most interesting parts of the collection are Scott's own notes," said Rebello. "He describes the mathematics at work in a very easy-to-understand way. This collection is a great resource for Florida Tech students."

One of the most interesting parts of the collection are Scott's own notes.

—Delroy Rebello, graduate student



Delroy Rebello, a graduate student in electrical engineering, is organizing and inventorying the collection.

AVIATION JOURNAL LAUNCHED

The College of Aeronautics has launched a biannual scientific publication, the *International Journal of Aviation Sciences*. The online-only publication is free to authors and readers and includes both basic and applied research on topics such as aviation psychology, aviation human factors and aeronautical engineering. The first issue, published March 1, can be found at www.ijas.us.



BUSINESS ETHICS CONFERENCE

The university's annual Business Ethics and Leadership conference explored issues in academic honesty this spring. Hosted by the Bisk College of Business, the event featured speakers from business and academia. The winning team in Florida Tech's annual high school ethics competition, from Rockledge High School, also shared its case presentation.

Jutta Williams, Health First's vice president for compliance and business ethics, addressed the students.

FIT AMONG NATION'S 'BEST VALUE' UNIVERSITIES

Florida Tech is one of the nation's Best Value Colleges, according to a new list developed by *Forbes* magazine. Featuring just 300 U.S. colleges and universities, the list was designed to provide students with a snapshot of schools that offer the most value for the dollar. The ranking is based on tuition costs, school quality, graduation success rates and post-grad earnings.



EXPERT ADVICE:

A Look at Lightning

What's a long, lazy summer day in Florida without an afternoon thunder-storm? So common to our summer soundtrack—the pitter-patter of rain on the window and the rumble of thunder in the distance—a summer shower can inspire a sense of nostalgia and wonder (or perhaps frustration if you're at the beach or on the golf course). Yet, severe weather is nothing to take lightly. Meteorology professor **STEVEN LAZARUS** shares a few lightning fast facts to remind us not to become complacent about a thunderstorm.

Rain or shine.

Oftentimes, folks are more worried about getting wet than they are about the serious threat of lightning. Remember, you can always change out of wet clothes. Plus, lightning isn't limited to a downpour. The strike may occur before it's even raining or outside of the rainfall area.

Anticipating the unexpected.

The most dangerous lightning strikes are the first and the last. The first strike comes unannounced. In fact, as noted above, it may not even be raining yet. The last strike falls during another period of uncertainty—has the storm passed? Is the coast clear?

Bottom line: Take cover.

As tempting as it may be to finish your golf game or catch one more wave, if a storm is approaching, take cover right away. It's important to err on the side of caution during a thunderstorm. If it comes down to counting mississippis, you're cutting it too close.

INAUGURAL ENDOWMENT

The School of Arts and Communication (SAC) received its first-ever scholarship endowment, thanks to Svafa Grönfeldt '95 M.S.
Grönfeldt, who earned her master's degree in technical and professional communication before going on to gain a doctorate from the London School of Economics, said the scholarship reflects a small token of her immense gratitude for the program. She named it the Grönfeldt-Strother Scholarship to honor her friend and mentor, former program chair Judith Strother, with whom she also co-authored a communication textbook, Service Leadership—The Quest for the Competitive Fdae.

"I really wanted to give something back to FIT, to the communication program, that reflected all that the program did for me," she said.

The Reykjavik, Iceland, native is the chief organizational development officer of Alvogen Inc., an international pharmaceutical company headquartered in Pinebrook, N.J. Previously, she was the president of Reykjavik University.

"The whole concept behind the scholarship is to facilitate international relations." Grönfeldt said.

The endowment is set up so that every other year, communication students are selected and awarded money to cover travel expenses for the SAC's Study Abroad Netherlands program. In alternate years, the scholarship will be used to bring an Icelandic student to Florida Tech.

"Because I'm Icelandic, I wanted this scholarship to encourage Icelandic students to come to FIT," Grönfeldt said, adding that those students can choose any course of study once they are at Florida Tech.

"I want them to have as much of a life-changing experience at FIT as I had," she said.

EVERY DAY A FREE DAY AT FOOSANER ART MUSEUM

Beginning in March, the county's leading fine arts museum eliminated admission costs—a benefit that had previously only applied to Thursdays. "Free admission is the best way to make our great exhibitions accessible to all," said Carla Funk, director of university museums.

BOUNTIFUL BOTANICALS

The 11th Annual Florida Tech Botanical Fest took place on March 5. Over 40 plant, garden and food vendors, as well as informational booths, adorned the Crawford Green during a perfect spring weather day! The event showcased some of Florida's finest botanicals, offering palms, exotics, native plants, ornamental shrubs, bamboo and flowering plants. Advice from Master Gardeners and free docent-led tours of the Botanical Garden were a popular feature for many during their visit to the festival. Funds generated from the event support the Botanical Garden's maintenance, improvement and expansion.



FOUNDATION MARKS 10 YEARS OF SCHOLARSHIP SUPPORT

The Lettie Pate Whitehead Foundation has made a grant of \$164,000 for scholarships to support women studying at Florida Tech. The foundation devotes most of its resources to the Lettie Pate Whitehead scholarship program. The foundation was established by Whitehead's son to celebrate the life of Letitia Pate Whitehead Evans who in 1902 and at the age of 42 oversaw the expansion of the Coca-Cola bottling business and went on to be the first woman to serve on the board of a major American corporation, serving as a director of The Coca Cola Company for almost 20 years. She was known for her keen sense of duty to those in need and for her contributions to charities. This is the 10th vear that the Lettie Pate Whitehead Foundation has made funds available to help deserving students pursue their educational goals at Florida Tech.



Florida Tech team members from left: Briana Cantos, Christopher Woodle, Mmusi Motsumi, James Kearney, Ronald-Dean Allado, Tyler Korte, Nicholas Persing and Michael Stratton.

First Place Robot

Florida Tech students claimed victory as the last robot standing at the Institute of Electrical and Electronics Engineers South East Conference in Norfolk, Virginia, this spring.

Teams from 45 southeastern universities showcased their innovative problem-solving skills with the goal of being recognized as the best technology institute in the Southeast. Florida Tech took first place in the robotics competition—a first for the university, and the team also received the exemplary student branch award.

The competition challenges teams to build an autonomous robot that can traverse a field of obstacles, pick up different types of blocks and deliver them to a destination.

CHOPPER DROPPER BY THE NUMBERS

2,000 golf balls

1,100 attendees

150 golfers

Over **50** athletic sponsors and partners

550 student-athletes

22 sports

Over **\$600,000**Raised for Student-Athlete
Scholarships





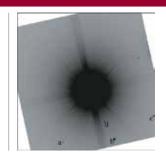
Rolex Raffle Winner

Deborah Mortiere has been supporting The Scott Center for Autism Treatment each year by purchasing raffle tickets for the center's annual Rolex Raffle, donated by Kempf's Jewelers. Portiere was this year's lucky winner at the drawing held April 16. Pictured, from left, are Leasha Flammio-Watson, Evening of Hope VIII co-chair; Deborah Mortiere, Scott Center supporter and Rolex Raffle winner; Michael Kelley, executive director of The Scott Center; Jason Kempf, owner of Kempf's Jewelers.

Enriching Research

THE INCREDIBLE TARPON EYE

Biologist **MICHAEL GRACE** and his team of researchers found tarpon have the rare ability to change the cell structure of their retinas as they progress from a newborn fish in dark, deep waters to mature adults that thrive in brighter, shallower waters. The results were recently published in *Visual Neuroscience*. Humans can see a million different colors—unusual in the animal world—but the adult tarpon eye is more amazing with the ability to see 100 million colors or more.



NEW IMAGING TECHNIQUE AIMED AT EXOPLANETS

A study led by astrophysicist **DANIEL BATCHELDOR** demonstrated that a charge injection device, an indexing camera developed in the '70s, has the ability to capture light from astrological objects tens of millions of times fainter than another object in the same picture. Very bright pixels get addressed very quickly, while the faint pixels continue gathering the fainter light. The CID solves image degradation problems experienced with a typical camera. Used in space, the device may have the ability to identify Earth-like exoplanets next to bright stars.

ROTC Cadets Visit Gettysburg, D.C.

During the American Civil War, the three-day Battle of Gettysburg (July 1–3, 1863) was one of the costliest and bloody clashes of that conflict. The battle and the overall campaign cost both Union and Confederate forces some 57,000 casualties (equal to American deaths in the Vietnam War).

Recently 14 Army ROTC MS IVs (seniors) of the Florida Tech Panther Battalion traveled to the battlefield in Pennsylvania to do a tour and battle analysis as part of their military training before being commissioned as Army 2nd Lieutenants. Professor of military science Lt. Col. T.J. O'CONNOR and senior military instructor Master Sergeant GEORGE FITZKE led this "staff ride," accompanied by associate dean and professor of history BOB TAYLOR, a Civil War specialist.



Cadets took turns delivering briefs on aspects of the battle while standing on the actual sites themselves and listened as O'Connor, Fitzke and Taylor gave additional insights on what modern Army officers can learn from battle. Two of the highpoints were cadets walking the almost one-mile route of the doomed Confederate attack known as Pickett's Charge. Next, O'Connor led a Panther Battalion "assault" on the steep rocky slope of Little Round Top, site of a crucial segment of the battle.

Next, cadets visited Fort Myer near Washington, D.C., for a special briefing from Col. Johnny K. Davis, commander of the 3rth Infantry Regiment known as the "Old Guard." This elite unit guards the Tomb of the Unknowns in Arlington National Cemetery as well as conducts thousands of military funerals and other events each year. A treat was a tour of the regimental stables where dozens of horses are housed; each one involved in almost every ceremony on the post.

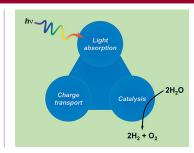
Lastly, cadets visited Arlington National Cemetery itself, watching the changing of the guard at the Tomb of the Unknown Soldier and hearing "Taps" played as wreaths were laid by a grateful nation. A final walk in the section of the cemetery holding the honored dead from Iraq and Afghanistan brought home again the price of freedom paid by American soldiers from Gettysburg to today.

-Bob Taylor

opportunity to learn about this pivotal battle in history has offered me an extraordinary glimpse into leadership and American history that will not be easily forgotten.

—Cadet Battalion
Commander Bryan Smith

WORKPLACE WOES: POLITICS AND SOCIAL MEDIA A psychology study led by **FELICIA KALOYDIS**, '14 Ph.D., and associate professor **ERIN RICHARD**, found that the more employees disclosed political beliefs on Facebook, the more disliked they were by coworkers who viewed this information. In turn, their coworkers helped them less, trusted them less and even rated their job performance lower. This was the case even when the coworker reported their political beliefs to be in line with the focal employee's beliefs.



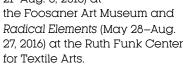
NUEST FOR SOLAR FUEL

With funds from the National Science Foundation's Center for Chemical Innovation Program, **MICHAEL FREUND**, chemistry department head, and an international team of researchers are working to design materials that can harvest sunlight in the form of solar fuel—much like the process of photosynthesis in plants. Freund's work specifically focuses on the development of membranes with electronic properties that can be integrated with light absorbers and catalysts to make artificial photosynthetic systems.

Celebrating Judy Roach's Love of Art

Art lover and artist Julia (Judy) Bradfield Roach left behind dozens of her own paintings when she died on March 14, 2015. Her husband

John continues to honor her by making sure that Judy's love of art lives on. In celebration of her life and her love of art, John has sponsored two art exhibitions at Florida Tech: Ray Turner: Population (May 21-Aug. 6, 2016) at



A much-loved English teacher, Judy turned to painting when she retired from Central Junior High School in Melbourne. "She loved people, she loved to read, and she loved to paint," says John Roach. "She didn't take up art until she retired. Then she took classes with a number of artists-starting with pastels and advancing to oils and acrylic. It was her way of expressing herself."

Judy and John met when they were both students in the Atlanta area; Judy followed her family's long-honored tradition of attending Agnes Scott College in Decatur, Georgia, and John earned his Ph.D. in electrical engineering at Georgia Tech. Their romance continued through the time Judy was away earning a Master of Arts in Teaching from

Brown University and after they were married, they moved to Melbourne where John worked for Harris. In Melbourne Judy raised two children and was

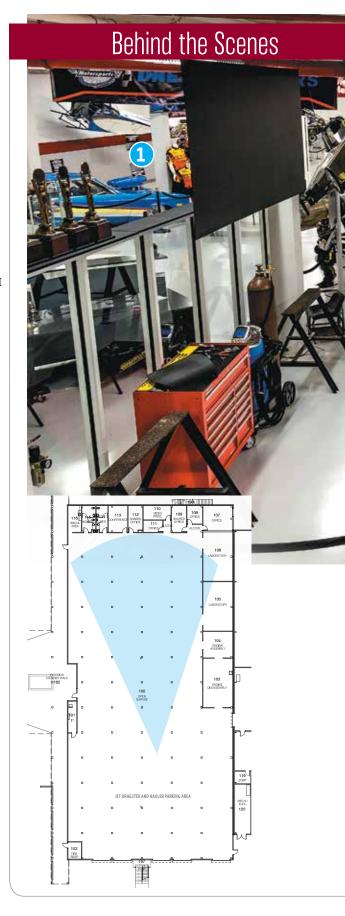
> active in a host of volunteer efforts, including the Junior Voters and Easter Seals. She supported Brevard Art Museum chance to be a part

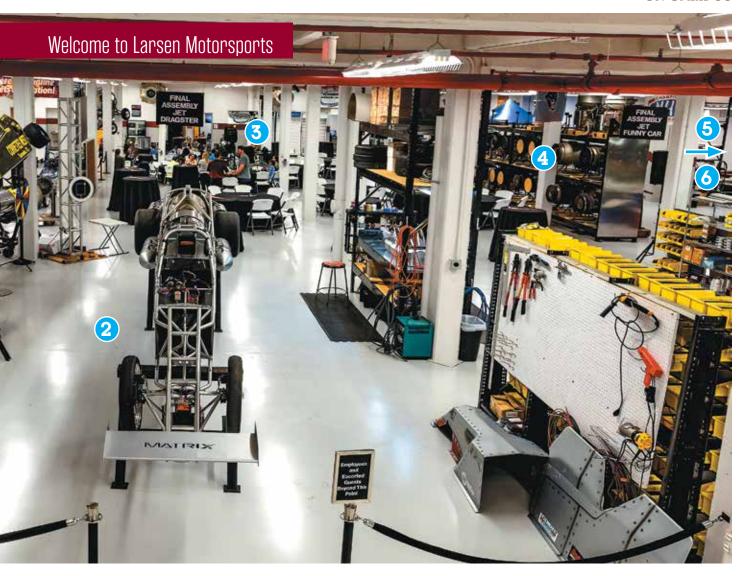


supportive of the Ruth Funk Center for Textile Arts.

When not enjoying the arts and the symphony at home in Melbourne, the Roaches traveled the world together and with alumni groups from Brown, Georgia Tech, the University of North Carolina and the University of Kentucky. "She was a great person to make everyone feel at home with that great smile," John recalls, "outgoing and always willing to meet new people."

While always sociable, art was something Judy did for herself. An avid reader, a writer and a member of five book clubs, art was a way for her to express her innermost thoughts and feelings. Her paintings are her legacy to her family. In turn her family is sharing what she loved most with the community through her husband's generous support of the exhibitions at Florida Tech's University Museums.





The 30,000-square-foot Larsen Motorsports (LMS) **High Performance Vehicles** Research & Development Center at Florida Institute of Technology's Research and Development Center features full-concept design, engineering and fabrication capabilities. Use of the center's facilities enhances the unique and powerful educational impact of the Florida Tech-LMS relationship. The shop currently employs 23 people. Most are Florida Tech students, who are getting real work experience while earning their degree.

Featuring Karting, Jr. Drag Dragsters, Formula SAE and SAE Baja, this display area showcases the diversity of LMS. From the highs of two-time World Championship jet dragsters to the lows of a terrifying crash, we put you right in the middle of where we came from and who we are today.

In the Jet Dragster Final
Assembly area of the LMS
completion center, race cars go
through their final assembly
process of wiring, plumbing,
engine installation and final
chassis geometry. It is also where
the car becomes highly
customized to the human factors
of each driver.

LMS hosts a number of schools, clubs and conferences in this area. With portable stages and sound system, the area can quickly configure to host groups with seating up to 250.

Jet Engine Inventory: At any one time, LMS stocks between 40–70 turbo jet engines.

(Not pictured)
The Fabrication Lab: Chassis, bodies and afterburners are fabricated in this lab.

(Not pictured)
Classroom: LMS holds a number of training initiatives ranging from race car systems familiarization, chassis set-up, driver and crew training to aerospace and high performance vehicles welding training and composite technology.

How is 21st-century manufacturing changing?

The key to any resurgence of manufacturing in America will not be in working longer or working harder. The key will be in working smarter. America will never compete with low wage countries in doing traditional manufacturing and assembly. However, the advances in digital technologies mean that we can transform traditional, labor-intensive manufacturing into 21st century manufacturing that reduces costs dramatically.

Product Lifecycle Management (PLM) and its concept, the Digital Twin, is all about working smarter. The premise behind PLM is to create a Digital Twin of the products we wish to manufacture and manage them throughout the products' entire lifecycle—from idea to retirement. The ideal of Digital Twin is the ability to design, test, manufacturing, operate and support the product in a virtual environment using inexpensive digital "bits."

Only when we demonstrate that the product can be manufactured efficiently and will perform with the reliability and quality our customers expect do we actually move around expensive physical atoms in new manufacturing methods such as 3-D printing. This Digital Twin method reduces both the costs and time to design and manufacture products. It also increases the quality and reliability that improves customer satisfaction. We make the product "virtually perfect" before we make a physical product that delights customers.

Florida Tech's new Center for Advanced Manufacturing and Innovative Design (CAMID) has been created to advance these 21st Century design and manufacturing concepts. CAMID is creating an ecosystem of large manufacturers, their small to medium manufacturing (SMMs) suppliers, our students, and our faculty. In CAMID, this ecosystem will come together, both physically in our new facility in Palm Bay and virtually over the internet.

CAMID's purpose will be to engage in projects that not only advance the research and development of 21st Century manufacturing, but to educate and train both the workforce of the future, our students, and the existing workforce who need these new skills.

CAMID has the opportunity to lead the way, not only locally, but regionally and even nationally in 21st-century manufacturing. PLM and its associated Digital Twin is the digital-based approach to design and manufacture products in America that are superior and globally competitive.

Michael Grieves is the executive director of CAMID and a research professor in the colleges of Business and Engineering. He is the author of the seminal books on PLM. His latest is *Virtually Perfect: Driving Innovative and Lean Products through Product Lifecycle Management*.



Hometown Hollywood

Doug Flutie, university trustee, philanthropist and football legend, competed on "Dancing with the Stars" this season. He made it through five weeks of the competition.



Snack Break Solved

Avenue C by Canteen, a self-service micro-market featuring college staples like coffee and snack foods as well as hardier fare like burgers and salads, is now open at the Bisk College of Business in the Babcock Oaks Building thanks to savvy students Margo McClintic and Thomas Haynie. The pair went above and beyond the requirements of their innovation and entrepreneurship class assignment to identify a campus need and physically launch a business venture to solve it. Read more at: http://bit.ly/1S5lh68.

In-Depth Student Design

Take an in-depth look at this year's student design projects exhibited at the Northrop Grumman Engineering & Science Student Design Showcase in a new multimedia website.



Jet-Powered Lesson Plan

Florida Tech's 2016 STEM poster, an initiative to inspire interest in science, technology, engineering and mathematics among high school students, illustrates some of the many factors involved in designing a jet dragster race car. The poster, distributed to high school teachers and counselors, is accompanied by a lesson plan on propulsion



developed with input from the Florida Tech departments of mechanical and aerospace engineering, and education and interdisciplinary studies. Check it out at: fit.edu/stem-poster.

Spence Humbled by Final Four Experience

Isaac Spence caps Florida Tech career in remarkable fashion

To many in attendance at the Final Four in April, "The Road Ends Here" banners plastered around AT&T Stadium indicated the NCAA Men's Basketball Tournament coming to a close. For Isaac Spence, though, the scattered signage meant much more than that—rather, it signified celebrating his fiveyear journey as a Panther with one final experience that'll most definitely stick with him the rest of his life.

Since stepping foot on campus at Florida Tech in 2011, Spence has been extraordinarily active, volunteering at numerous local organizations and serving as president of the Student Athlete Advisory Committee (SAAC). In addition, he acted as the driving force behind the men's basketball squad joining forces with Team IMPACT in signing Jesse Youmans, a local 5-year-old who suffers from the congenital heart defect known as Tetralogy of Fallot.

Back in February, the 23-year-old became the first men's player from the Sunshine State Conference to be selected to the Allstate NABC Good Works Team, an award for his special dedication to the community and selfless acts to better the lives of others. With the honor came an all-expenses paid trip to his old hometown in Houston, Texas, where he was able to interact with nine other student-athletes from across the country like himself and meet and learn from legends such as Clyde Drexler and Dick Vitale.

"I was born in Houston 23 years ago and now, through a lifetime of basketball, was awarded the opportunity to finish my basketball career with this amazing event," said Spence. "It was humbling because it shows that even though basketball

was always my main focus, it has also opened up a platform where I could give back to the community. That's what this was really all about."

Along the way, Spence had the opportunity to share his gifts during a youth basketball clinic with the Special Olympics of Texas, specifically teaching dribbling techniques to those in attendance and even Hall of Famer Hakeem Olajuwon. Spence was also treated to police escorts and tickets to the memorable, buzzer-beating title game during his stay, but was most fortunate to soak it all in with none other than his father by his side.

"Since I was 5, I've been playing basketball, and he, along with my mom, have been my biggest fans," Spence said gratefully. "To have him there was nice. This weekend was just a slight piece of everything he's done for me. He was in as much awe as I was. It was more for him than me because I wouldn't be in the position I am if it wasn't for my parents."

With his playing days now in the rearview mirror, Spence is set to graduate in May with a dual degree in both aerospace and mechanical engineering. While he may be unsure exactly what the future holds, he knows for certain that he'll be leaving Florida Tech with no regrets.

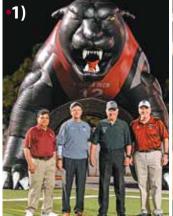
"I know looking back I've made mistakes like everyone else will," he said. "What I've been able to accomplish, though, from both an athletic and academic standpoint is extremely rewarding. Even more so, what I've been able to do in the community, I've hopefully been able to leave a legacy."

—Jameson Carter





FLORIDATECHSPORTS.COM









part of FIT's 200-yard and 400-yard freestyle relay teams.





Current FIT soccer and lacrosse player JULIA KANTOR has been selected as an amateur trialist for the upstart Orlando Pride of the National Women's Soccer League, playing on the same team as U.S. Women's National Team stars Alex Morgan and Ashlyn Harris. Kantor is practicing with the Pride while completing her undergraduate degree in sports psychology.



After averaging 15.0 points, 9.4 rebounds and 2.1 blocks per game in 2015-16, senior CORBIN JACKSON earned his third-consecutive SSC Defensive Player of the Year award and was also named an All-American by Division II Bulletin.





FOCUSED ON STUDENT SUCCESS



I want people to understand that we are one of the best 100 engineering colleges in the United States.

—T. Dwayne McCay



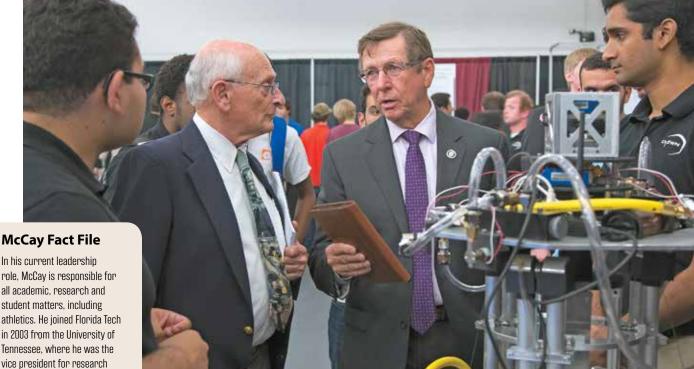
FLORIDA TECH'S CHIEF ACADEMIC OFFICER FOR 13 YEARS, T. DWAYNE MCCAY ASSUMES THE PRESIDENCY JULY 1. IT WILL BE A NEW ROLE FOR THE FORMER UNIVERSITY OF TENNESSEE ADMINISTRATOR AND NASA ENGINEER, BUT ONE FOR WHICH HE IS PREPARED.

FLORIDA TECH TODAY SAT DOWN WITH MCCAY TO GET A BETTER SENSE OF HIS PERSPECTIVE REGARDING THE UNIVERSITY'S FUTURE.

Has serving as a university president always been an aspiration?

Well, I never had a plan for my life. I was always someone who was interested in the next great exciting opportunity. So, if you track my career over the years, I went from one exciting position to another ... and, the grass is usually greener on the other side even if you're moving from Tennessee where it truly is green to the desert of California where there's no grass at all. But, I was always moving because of some technical problem that was very exciting and enticed me to go.





McCay and Martin Glicksman, dean of the College of Engineering, provided feedback to students about their project at the Northrop Grumman Engineering & Science Student Showcase.

student matters, including athletics. He joined Florida Tech in 2003 from the University of Tennessee, where he was the vice president for research and information technology and served as the chief research officer and chief information officer.

Earlier, as a vice president at the University of Tennessee. he served as CEO of the Space Institute; professor, **Engineering Science and** Mechanics; adjunct professor. Mechanical and Aerospace Engineering; program chairman, Engineering Science and Mechanics; chairman of the Center for Laser Applications: and principal investigator, NASA Spacelab Experiment.

Previously McCay was at NASA George C. Marshall Space Flight Center in Alabama. There, in the Structures and Propulsion Laboratory, he was chief of the Propulsion Division: branch chief of Turbomachinery and Combustions Devices Branch and of the Propulsion Analysis Branch; and senior aerospace engineer of the Auxiliary Propulsion Branch. He and his wife, Mary Helen McCay, who holds a Ph.D. in Metallurgical Engineering and was a decorated NASA engineer early in her career, reside in Melbourne. Together, they hold 18 patents based on their materials processing research. She holds an additional four patents in alloy development.

Florida Tech has a long history of being an attractive educational option for international students, and you've worked diligently to strengthen the university's international reputation in your role as executive vice president. What contributes to Florida Tech's attractiveness to international students?

As the executive vice president and provost, I had an ability to interact at a different level in international arenas than our recruiters did because they didn't often, in those countries, get an opportunity to sit down with either a provost or president there and discuss our various programs. And what you have to learn, and our recruiters are good at advising me, is every country is a little different. So much of it is culture-based. In the places that have heard of us and knew quite a bit about us, it was much easier to recruit, but the driving aspect of the culture was so important. In some countries it's the respect for their fundamental religion. In China, for example, the number one concern that Chinese parents have for their children is safety. In others it's your international reputation and ranking. It's the fact that we're a safe, small,

personal university of very high quality that appeals to families all over the world.

You've said before that if you could build a university like Florida Tech anywhere in the world, you'd probably build it here. Why is that?

If you drive in any direction, you'll run into dozens of some of the leading aerospace and technology companies in the world, whether it is Lockheed or Northrop Grumman or Harris or Rockwell Collins or Boeing, they're all here. So, since one of my primary goals is to develop student graduates who have great careers, what's easier than doing it in a place where they can make their entire career if desired. I can't believe how fortunate it is for everyone here that Dr. Keuper decided to open this university at this location.

You've gotten to meet many Florida Tech alumni over the years. What has been your overall impression of them?

Well, I don't like these kinds of expressions, but you can't help but be blown away. If you look at the fact that there are over

500 Florida Tech graduates at Harris, one of the leading communications companies in the world, there are over 500 at Northrop Grumman, over 500 work out at Kennedy which has been the focal point for our space program now for an extended period of time. Even in the new companies—some of the lead engineers for SpaceX are not only Florida Tech graduates, they're young Florida Tech graduates. If it doesn't blow you away for a school that's as small as we are, that has only been around for 50 some odd years and has produced 40,000–50,000 graduates, unbelievable. Incredibly impressive.

What are some ways you'd like to see the alumni support their alma mater in the future?

People always immediately think that means money and in reality there's a lot more to it than money. To me it's more about participation. While I would like every alum to give us a few dollars so that we can show how much appreciated we are to the various rating agencies, it's more about participation, about sending their information to the magazine ... I mean, we have so many wonderful graduates that have been incredibly successful but it's hard to run all that down without their help so, participation more than anything.

How do you describe your vision for Florida Tech's future?

I think we are one of the better private engineering colleges in the country and in terms of the quality of our graduates, I truly believe we are as good as anybody. I want people to understand that we are one of the best 100 engineering colleges in the United States. I always go back to the three-part mantra that I've used for a long period of time: our number one goal is the success of our students—careers for a lifetime of joy and happiness. I want them to really love their career. Second, all research universities produce a variety of results, and I want those results to manifest themselves in ways that make life better for everybody. It would be great if we were riding along in an automated car where on the dashboard it says powered by Florida Tech engineering. Third is that everyone who walks out of these gates is a global citizen. They understand the cultures, they understand the attitudes, they understand and appreciate the diversity that makes up this planet and have a respect for the planet such that we all pull together to make our world a safer, healthier place to live.

-Wes Sumner

Past Presidents -



Anthony J. Catanese, 2002 to 2016. The urban planner was a previous president of Florida Atlantic University. At Florida Tech, he oversaw a period of unprecedented growth, greatly expanding athletic offerings, including the addition of football. Facilities were added including The Scott Center for Autism Treatment and the Harris Student Design Center. His efforts culminated in a \$123.4 million capital campaign.



Lynn E. Weaver, 1987 to 2002. Weaver was previously the dean of engineering at Auburn University. In 1997, he was instrumental in securing a \$50 million grant from the F. W. Olin Foundation, which funded new buildings for engineering and life sciences and established a number of endowed scholarships. He remains an international authority on energy issues and nuclear engineering.



John E. Miller, 1986 to 1987. Miller was vice president for academic affairs from 1966-1975 and was executive vice president until becoming president. He received a senior science fellowship at Stanford University and was a Distinguished Professor of Physics at Clemson University. Miller is credited with helping obtain accreditation for doctoral programs from the Southern Association of Colleges and Schools. He passed away Dec. 14, 1993.



Jerome P. Keuper, 1958 to 1986. The university's founding and longest-serving president. He came to the Space Coast in 1958 as chief scientist in RCA's Systems Analysis Group and sought to build a "night school for missilemen" working at nearby Cape Canaveral. Under Keuper's guidance, the university grew from 225 students in 1958 to more than 7,500 in 1983. He passed away March 26, 2002.



hattering university fundraising records and setting a new high-water mark for Space Coast philanthropy, Florida Institute of Technology raised \$123.4 million for its Create The Future campaign. More than 400 university supporters, alumni and community leaders attended the black-tie gala in the Clemente Center to celebrate the successful conclusion of the campaign—the most ambitious fundraising effort in Florida Tech's nearly 60-year history, and the largest effort of its kind ever launched in Brevard County.

"When we first conceived the idea of the \$100 million Create The Future campaign, some said that it could not be done," said Florida Tech President and CEO Anthony J. Catanese. "What this campaign has affirmed for us, and demonstrated to others, is that Florida Tech is a university which routinely exceeds expectations. With hard work, determination and careful planning, possibilities arise that would not otherwise exist. We are grateful to our many friends and supporters for making this campaign possible."

The campaign received a number of key gifts, including:

- Research and Development Center—
 \$13.1 million, 100,494-square-foot facility gift from the Intersil Corp. to create a new center for science and technology on Palm Bay Road
- Harris Student Design Center—
 \$1 million gift from Harris Corp. to fund the 11,500-square-foot facility for students to construct science and engineering projects
- The Foosaner Art Museum—\$1 million gift to reestablish the former Brevard Art Museum in downtown Eau Gallie

Other important gifts have supported programs such as the Nathan Bisk College of Business, allowing for its expansion and relocation to Babcock Oaks. Donations have benefited numerous student scholarships and boosted the university's endowment as well as supported programs and research at its five colleges, two museums and library. The Create The Future campaign's successful conclusion is a fitting tribute to Catanese's tenure as president. He will retire June 30 after 14 years as Florida Tech's leader and join the university faculty.



George Hageman, Juanita Brooks, Larry and MaryBeth Kenkel



Robert and Deborah Phebus



Mike and Rashmi Shah



Lisa and Joseph Caruso Sr.







T. Dwayne and Mary Helen McCay



Winston Scott, Buzz Aldrin and Jack Pruitt



Sharon and F. Alan Smith



Donald Hendrick and Dee Negroni-Hendrick





Stephen Badolato, State Senator Thad Altman and David Badolato



Jane and Andrew W. Revay Jr.



David Carbone and Stephen Thomas



Travis Proctor and Teresa Ho





William Brown, Phillip Farmer and Jack Hartley



President Anthony J. Catanese



Stephanie and PJ McLoughlin



Francisco and Patricia Picornell





Dennis and Melbourne Mayor Kathy Meehan



Kelly and Ben Malik



President Anthony J. and Sara Catanese







Carolyn and Dick Baney



Sohair Wastawy and Elbaz Kareim



Margarete and Lawrence Mertens



Jeanne and Phillip Farmer





ENGINEERING AN ENTREPRENEURIAL ECOSYSTEM (==



Providing An Environment To Inspire Students From Conceptualization To Commercialization

The gleam in Christopher Kennedy's eyes says it all. "Getting to launch two rockets in one day? It doesn't get any better than this for me. I'm beyond excited," said Kennedy, a senior aerospace engineering student.

One of those rockets is his team's senior capstone design project, a small, solid fiberglass construction named "Hydra" as homage to the Captain America comic books and movies. But while the name is steeped in fiction, the rocket's purpose is very real.

"The main thing we're testing is a hypersonic inlet that is embedded in the nose cone. We're collecting pressure and temperature data inside the inlet to relate a lower-speed, lower-altitude flow to one that is usually higher up and faster," explained Kennedy, who serves as the lead rocket specialist on the project and aspires to have a career flight testing newly developed aircraft and spacecraft.

The project could signal a reduction in the overall cost of hypersonic flight testing.

"This allows us to expand the possibility of hypersonic flight testing down to the university level, which opens up the door to a greater audience. The entrepreneurial potential is great," Kennedy said.

Thinking about marketplace opportunities and enduser applications of design concepts and inventions are becoming the norm for an increasing number of Florida Tech students like Kennedy, thanks to significant partnerships in the College of Engineering and Nathan M. Bisk College of Business and recent campus additions intended to foster an entrepreneurial mindset.

"It's really an exciting time to be on campus," Kennedy said. "You can see your idea go from concept to design to prototype, and prototype can lead to entrepreneurship."

Sure, Florida Tech has transformed itself into a world-class research center over the last decade with such additions as the Harris Center for Science and Engineering and The Scott Center for Autism Treatment. But the university has also built a solid reputation as a champion of entrepreneurship, helping to foster generations of business owners and founders over the university's 60-year history—an accomplishment that landed



Florida Tech on *Forbes* magazine's list of the nation's 50 most entrepreneurial research universities last year for the second consecutive time.

In recent years, the university has rolled out new strategies encouraging students to engage in learning opportunities designed to ignite creativity and innovation as well as to provide business skills necessary for them to blaze their own paths.

This thrust toward expanding engineering education to include an entrepreneurial focus is evident in the new programs, partnerships and facilities that have come to life within the last year. These include:



The Harris Student Design Center, an 11,500-square-foot structure made possible by a \$1 million gift from Harris Corp., located on the

south side of the main campus. The center, which opened in November, serves engineering and science students completing capstone design projects;



The Center for Advanced Manufacturing and Innovative Design (CAMID) located in Florida Tech's Research and Development Center on Palm

Bay Road. The center, which opened in January, provides general advanced manufacturing training along with labs, training and design tools and methods specifically for aeronautics, aerospace engineering and the space industry;



The **Digital Scholarship Lab** (DSL) on the second floor of Evans Library, which officially opened in January, supports research, teaching and learning

in all Florida Tech disciplines through the use of hands-on digital tools and applications;



The Larsen Motorsports High Performance Vehicles Research & Development Center, a

30,000-square-foot space in the university's

Research and Development Center that opened in February. Backed by the university's affiliation with the award-winning racing organization, the facility features full-concept design, engineering and fabrication capabilities where students get to fabricate everything from afterburners to chassis components and to learn about the day-to-day operations of the company's jet-powered dragsters; and



The Kern Entrepreneurial Engineering
Network (KEEN) Innovative Challenges, a series
of weekly engineering design competitions that

kicked off in late January. The challenges, patterned after similar competitions at St. Louis University, are fueled by a grant from the Kern Family Foundation.

These initiatives join other programs and facilities that are already thriving on campus, including the Nathan M. Bisk College of Business' Momentum Student Business Incubator, which launched in late 2012 to assist students in creating their own businesses while earning their Florida Tech education.

Collectively, they are all a part of an emerging entrepreneurial ecosystem on campus.

Dean of Libraries **SOHAIR WASTAWY** said this system of resources is necessary in order to meet the needs of those preparing to enter the 21st-century global marketplace.

"It is all about providing our students with the tools needed to engage technology in novel and new ways to get ideas across, while also nurturing entrepreneurial thinking," she said.

For instance, the DSL was born from Evans Library recognizing that student and faculty researchers needed digital tools and resources such as data curation, digitization, spatial analysis and visualization to enable them to access, integrate and share current and future research.

"Building the DSL was our response to the new forms of scholarship and FIT's cross-disciplinary collaboration for breakthrough innovation," Wastawy explained.

Fostering creative freedom



With a vibrant, open workspace for creating and nurturing ideas, the DSL offers students technological tools that include graphics intensive applications, interactive computing, Geographic Information Systems (GIS), large-scale multi-touch displays, virtual reality, 3-D printing and scanning, and textual analysis.

"We observed the students when they worked and saw what resources they were using and what tools they needed. We then surveyed faculty from six colleges and they all said 'yes, this is what we need."

—Dean of Libraries Sohair Wastawy

More than 12,000 people have visited the lab since its soft opening in November, a couple of months before it formally opened in January.

NATALIE SHAH is one of them.

"The first time I went into the DSL, I sat on one of the cone-shaped chairs and just spun around. It was the day after it officially opened, and there was so much to take in," said Shah, a sophomore majoring in biomedical engineering.

"It definitely fits the needs of students, with everything from whiteboards and Mac computers to the touchscreen SMART board. The whole place is bright, open and inviting. It's a great area where you can go and study," she said.

Senior **MILTON STAFFORD** said the facility gives students creative freedom, with a layout that is "almost like you're in this Google brainstorming room."

Stafford, a computer science major, participated in Florida Tech's first hackathon, FloridaTechHacks, which was held in the DSL in early April and sponsored by the KEEN grant. He was among 142 participants from six Florida universities who came together to create and complete 32 projects within 24 hours.

NANCY GARMER, interim assistant dean in user experience and learning in Evans Library, said the event was successful in bringing students together to network and strengthen their team-building skills.

"Students worked in multiethnic and gender-mixed teams of four persons or less to create projects that they presented to judges, with prizes awarded to the most innovative and implementable designs," she said.

First place was awarded to a team who created an app to scan food ingredient lists on packaging to determine if a consumer is allergic to any of the ingredients. "The entire event really was so much fun, it was so great to see all of the students with their energy and ideas," Garmer said.

Stafford said he went into the event expecting it to be an intense coding session. Instead, he found it to be so much more than that.

"The hackathon enabled us, as students, to go from creating an idea to actually developing ways to advertise and sell that idea," he said.

Stafford and his team came up with the concept of building an FIT digital storefront that would allow students to buy and sell from each other in an easy-to-use, online and mobile-friendly marketplace directly connecting buyers and sellers, similar to Craigslist.

"For about nine hours, we spent time developing the implementation of this idea. It was different for me in the sense that I was doing something I'd never done before, which was to create a no-sequel database backend for the application," he said.

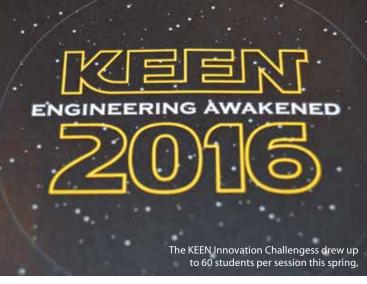
"The mindset was different in that I also was looking at potential consumers for this idea. The thought of having a demographic—clients to work with on a long-term basis— changed my perspective," he said.

Before participating in the hackathon, Stafford admitted that the extent of his entrepreneurship was to sell his own skills as an employee.

"This event gave me the perspective of selling the things that I produce, not just myself as a producer," he said. "I think it turned into a much more well-rounded experience for me and everyone else."

Major League Hacking, an organization that supports over 200 weekend-long student invention competitions annually around the world, certified this year's hackathon.

"We're already gearing up to host another one next year," Garmer said.





Thinking past the product



HUNTER LEE, a mechanical engineering sophomore, said he would consider participating in next year's hackathon. However, one of his main interests on campus this semester was the KEEN Innovation Challenges.

"I participated in three challenges and had a lot of fun in each one," Lee said. "I can't wait to do it again."

The event features teams of three students (with at least one engineering major) given challenges requiring them to communicate, organize and plan their solutions within a one-hour timeframe. Prizes are awarded to select teams at the end of each challenge.

"Each experience was different because you never knew what task you'd get," Lee said.

"For instance, my first challenge had my team building a chair for a character on "The Simpsons" for a specific situation. Another one was coming up with a whole presentation on why being an engineer is awesome.

"No matter what the challenge, each team had to think on their feet and come up with either a prototype or presentation in less than an hour," he said.

Lee said the best part of the experience was having the opportunity to brainstorm and work with other engineering students to come up with cool ideas.

"It totally challenges your brain and team-building abilities," Lee said.

And that is what the experience is designed to do, said **BESHOY MORKOS**, an assistant professor in the department of mechanical and aerospace engineering.

Morkos is one of the co-principal investigators of a \$276,000 grant given to FIT by the Kern Family Foundation to partner with the Kern Entrepreneurial Network (KEEN) of colleges and universities to develop and implement strategies that promote the entrepreneurial mindset.

Along with **CHIRADEEP SEN** and **DANIEL KIRK** in the College of Engineering, and **ABRAM WALTON** from the Nathan M. Bisk College of Business, Morkos leads a team of 18 faculty members and 90 students charged with creating curricular and extracurricular activities on campus for this purpose.

"Our goal is to try to get students to think differently, to think past what they are producing and look at the bigger picture," Morkos said.

He said the innovation challenges provide the perfect environment for that.

"When you put a bunch of engineers in a room and tell them to design a solution to a problem, they start thinking about how to approach it. But then, they also start looking around the room and begin to realize there are 10 other people thinking along the same wavelength.

"Because these challenges are competitive, it dawns on them that they really can't just get away with having a good engineering solution, there has to be added value. There has to be more to it, something different," Morkos explained.

"These challenges force students to think past the product. That kind of thinking is instrumental in the entrepreneurial mindset we want them to have," he added.

The challenges, which drew up to 60 students per session this spring, are slated to resume in the fall.

Lee, who wants a career designing and testing new automotive products, said the innovation challenges gave him the opportunity to meet more engineering professors as well as to connect with other students with similar aspirations.

"We were all in there together, in our teams sharing ideas and finding solutions in innovative ways. It felt good to exercise my brain in a different way," Lee said.

"I felt like I was stretching my boundaries, and I'm ready for more."

-Rolanda Hatcher-Gallop

ALUMNI NEWS

FROM THE FTAA PRESIDENT

CHAD C. SHOULTZ '96

Dear Florida Tech Alumni, Students, Parents and Friends:

Congratulations to the Spring '16 graduates and welcome new alumni! Grad Bash, which was held outside of the Gleason Performing Arts Center the night before graduation, continues to grow in popularity with the graduating class, their family and friends. I was thankful to be there and experience the excitement and celebration of your significant accomplishment.



The FTAA board of directors is grateful for the leadership and tremendous progress the university has made during the 14-year tenure of Dr. Catanese as president/CEO of Florida Tech. Thankfully, Dr. Catanese will remain on campus as part of the faculty. This summer we will welcome Dr. McCay as the new president of our university. We look forward to the continued progress and recognition of Florida Tech as we've become accustomed to over the last several years. I'm encouraged by the engagement and dedication of Dr. McCay, the faculty, staff, community partners and alumni.

The board of directors is striving to improve its productivity and effectiveness as a board. Recently, many of the board members attended a Chuck V. Loring workshop that focused on board governance.

I encourage you to attend an alumni reception in your area. It is a fun way to reconnect, meet new friends and hear the latest accolades Florida Tech has received. Check out the upcoming events and recent news on our FTAA Facebook page, follow our LinkedIn alumni group and alumni.fit.edu.

Committed to increasing the value of our degrees! #PantherPride

che sent

YOUR ALUMNI ASSOCIATION OFFICERS

Chad Shoultz '96 | President | Indialantic, FL | cshoultz@cfl.rr.com

Andy Kirbach '90 | Vice President | Melbourne, FL | akirbach@gmail.com

Rhodie Humbert '82 MBA | Secretary | Melbourne, FL | rhodiehumbert@aol.com

Brian Stahl '86, '88 M.S. | Treasurer | Satellite Beach, FL | brianmstahl@gmail.com

Kim Bozik '87 | Member-at-Large | Chandler, AZ | kim.b.bozik@intel.com

David Murphy '91, '01 M.S. | Member-at-Large | Winter Garden, FL | davemurphyrr@hotmail.com







Submit your AlumNotes to alumni@fit.edu Share your news

1970s

HAROLD MCGINNIS, Ph.D.,
'71, '73 M.S., former instructor, Student Government
president and varsity soccer
co-captain, recently was cast
in the AMC television series
"Halt and Catch Fire". He
currently serves as a dissertation coach for clients throughout the United States and
other countries and teaches
graduate courses for several
universities



ROGER "MIKE" CLANCY '73 was recently inducted into the Fleet Numerical Meteorology and Oceanography Center (FNMOC) Hall of Fame, becoming the 25th person so honored in the 55-year history of the organization. He retired as FNMOC technical director in 2011, after a 32-year career in Navy Meteorology and Oceanography.



DEBORAH AYARS '74 PE, PP, was recently inducted into the Cumberland County Woman's Hall of Fame in New Jersey. She was cited for her professional career being the first female to serve as county engineer in New Jersey, and for starting and managing her own engineering firm for over 20 years.

CARL BLANK '75 M.S., MBA, retired Oct. 14 from Lockheed Martin.

GAIL BLANK '75 retired from the Texas Commission on Environmental Quality.

MARK BREWER '75, airport director at Manchester-Boston Regional Airport, has received the American Association of Airport Executives' Distinguished Service Award, which is presented to airport executives in honor of an exemplary career and contributions to the airport industry. He received the award at the 30th Annual AAAE Aviation Issues Conference in Maui, Hawaii



Retired Gen. ANN DUNWOODY '75 M.S., the first female four-star general in U.S. Army history, shared her insights into leading, managing and making history at SUNY Cortland as the executive-in-residence



WAYNE "LARRY" DANDRIDGE
'77 M.S. recently wrote α
history book, Blades of
Thunder. The book chronicles
the helicopter war in Vietnam
in 1968 and 1969. It combines α
realistic combat narrative
with the emotions of the time.



BRUCE WHITE '78 is enjoying life. He is currently owner/chief building inspector for Buyers Profile (www.buyers-profile.com) and living in Laguna Beach, California. He wishes all his past classmates and TKE's the best.

1980s

DAVID ANDERSON '80 M.S., author of the Sorcerer Series, is proud to share that book 3, The Savior of Cheron, was recently published and book 4, Angel Assassin, is planned for publication in the summer of 2016.

JOHN "TOM" HAWES '80 launched the Denton territory for The C12 Group, America's leading Christian CEO and Business Owner roundtable organization. He worked in key roles for Texas Instruments for 28 years before joining the C12 team.

ROBERT MUSTERER '81 started Ulticareer.com to assist in answering the question, "what do you want to be when you grow up?" It is intended to be a career research site which includes excerpts describing a day in the life of said career. Community contributions also describe what people like and don't like about their jobs.



ON THE ROAD

Phoenix



President Catanese, Jennifer Goslin '97



Jin Seder '97, Mahendra Shah '72, Paul Kempin '86

Dad Vai



Capt. Dennis Bourne '81, Craig McKay '81

ALUMNOTES

CHRIS FAULKNER '83 has been an elementary school teacher for 31 years. He is the grade 1-5 science teacher and is retiring at the end of this school term. Graduating from Florida Tech, marriage, fathering two daughters and finishing up a demanding but rewarding career as a public school teacher are lifetime milestones that he cherishes.



PATTY SELLERS '85 and Larry have a happy addition to their household. Max is a white English crème golden retriever. He enjoys long walks on the beach and the occasional stuffed animal

JONATHAN ZUNG, Ph.D., '86 has been named group president, Clinical Development & Commercialization for Covance Drug Development for Laboratory Corporation of American Holdings® (LabCorp®). He will lead a global organization with employees in 60 countries spanning all phases of clinical development and global market access services. He currently is a member of the board of directors of the Clinical Data Interchange Standards Consortium.

MURSHID KAHN '88 has been named COO and serves on the board of directors for RealTek Holdings. He comes to RealTek Holdings, LLC from Stewart Information Services Corporation where he served as chief information officer (CIO) since April of 2007..

WILLIAM CRAIG '89 Psy.D. recently published a book entitled Integrated Psychological Services in Primary Care.



TODD **INSLER** '90 has been appointed to the United Airlines board of directors. He is a

B-767 captain with United Airlines.

Rear Admiral DAVID SCORE '90 was nominated by President Barack Obama to the key administration post of director of the National Oceanic and Atmospheric Administration (NOAA). He has received eight NOAA special achievement awards and two Department of Commerce bronze medals, and was named the 1999 NOAA National Association of Commissioned Officers Junior Officer of the Year.

KEVIN CROWLEY '91 M.S. was recently named the Jeppesen chief executive officer and vice president, Digital Aviation, for Boeina. He most recently served as vice president, Technology Development. He joined Boeing in 1989 in Huntsville, Alabama, as a software enaineer and has held numerous leadership positions in Boeing Commercial Airplanes and Boeing Defense and Space engineering, and program management organizations.

SALLI SETTA '91 MBA Red Lobster® president has been named to the Women's Foodservice Forum Board, the food industry's premier leadership development organization. She is a 25-year veteran of the restaurant industry, was selected for her experience leading a globally recognized brand that is committed to supporting the advancement of women.



JOAQUIN FABREGA '91 enjoys astronomy as a hobby. Alain Maury, a French astronomer, was kind to name asteroid 18649 after him. Today he owns an observatory in San Pedro de Atacama, Chile. This observatory has the Minor Planet Center code W95. Last January the observatory was recognized as a Near Earth Survey Observatory. He wishes all the best to the class of 1991.



SCOTT **BOYER** '91 MBA ioined Strive Logistics. a technol-

enabled third-party logistics provider as president. He most recently served as chief commercial officer of M33, a co-managed transportation services company. He has over 20 years of experience in logistics, transportation and supply chain management.

SHERRY ACANFORA-RUOHOMAKI '93, '00, '05 M.S., owner and president of K9 Kampus of Melbourne, received the 2016 Florida Small Business Person of the Year Award from the U.S. Small Business Administration. K9 Kampus is a luxury dog daycare and boarding facility that includes full-service grooming, indoor air-conditioned training, a zero-entry pool and nearly an acre of outdoor romping space.





CLARA BENNETT '91, ALAN PENSKA '82, SCOTT KOUHUT '07 and REBECCA HENRY '99 were panel moderators and session panelists at the Florida Airport's Council (FAC) annual conference. Over 40 College of Aeronautics alumni were prominent in their attendance and leadership. Alumni and students are pictured above.



Men's V8 coxswain being tossed into river after win.





Florida Tech fans lined the river's edge. Bill Jurgens hold the coveted Men's V8 trophy.

ALUMNOTES



CONCERT SERIES: JAY LENO IN MELBOURNE





Alumni and friends gather for a reception before Jay Leno's performance at the King Center.

Continued fromn page 33



MICHAEL BURTT '93 shares a photo of his twins, Chandler and Coleman, preparing for another football season in Gulf Breeze.

GREG CONNOR '93 has been named general manager of WACH-TV (FOX), Sinclair Broadcast Group, Inc. in Columbia, South Carolina. He has been with Sinclair for the past 15 years in various positions and network affiliates.



YUKI NAOTORI '94 was appointed country manager of Quipper Inc. in the Philippines, Indonesia and Thailand. More than 200,000

Filipino students are studying math, science, English and other subjects under the online K+12 basic curriculum. He is married with two children who study and live in Makati City. On weekends, he engages in sports such as marathons and triathlons.

Capt. SUNITA WILLIAMS '95 M.S. gave a presentation at the Onizuka Space Science Day which is dedicated to Ellison Onizuka, a Space Shuttle Challenger astronaut who perished along with six other crew members. This year marks the 30th anniversary of the accident. Over 900 students grades 5–12 participated in demonstrations and activities.



HEATHER SCHNEIDER '97 was recently named chief financial officer at Florida Medical Center. She joins the administrative team with extensive financial health care experience, having most recently served as a chief financial officer at The Hospitals of Providence East Campus, a 182-bed acute care hospital in El Paso, Texas.

2000s

JEFFREY COX '01 M.S.

received a Doctor of Business Administration degree with a concentration in International Business from Argosy University. He is a member of Sigma Beta Delta.

JOHN MOORE '02 Ph.D. is the new president for Pierpont Community & Technical College. The Presidential Search Committee unanimously chose him to be their third president. He currently serves as a special assistant to the president at Northeast Texas Community College and previously served as the president of Philander Smith College in Little Rock, Arkansas.



CARLOS CHINFONG '03 and wife Stephanie welcomed their first addition to the family, Carolina Alexa on Nov. 22, 2015. Carlos is a supply chain manager at Chevron and Stephanie is a marketing manager at a nonprofit organization that helps teachers further their studies. The happy family lives in Houston, Texas.

ON THE **ROAD**

Fort Lauderdale



Tania Gay '07, Brent Hollenbach '12, William Wing '12, Christine Otto



Tiara Brewster '07, Tussacia Brewster '07



Willie Arnold '79, Peter Chesla '98, Matt Dumier '97

Orlando



President Anthony J. Catanese, Calvin Potts '07

Submit your AlumNotes to alumni@fit.edu



CLAIRE SURREY-MARSDEN '04 and CHAD MARSDEN '02 welcomed new panther cub Everly Rose in January 2016. Big brother Hudson, 4, is thrilled! Claire is a NOAA Corps officer currently stationed in north Florida working in right whale conservation management.

MARY BONNELL '04 is recognized by Continental Who's Who as a Pinnacle Professional in the field of government services as a result of her role as director of contracting with the U.S. Army-Regional Contracting Office. She was recognized as a VIP Woman of the Year by the National Association of Professional Women as a direct result of her ongoing successes. She enjoys reading, gardening, sewing and spending time with her dogs. She maintains affiliations with organizations such as Fisher House and local animal shelters, homeless shelter. food bank and at-risk youth programs.



MELISSA ADAMS '05 is employee of the month for Bureau of Water Resource Information in the Palm Bay Service Center. She is an environmental scientist and is credited with developing a number of new processes to create more efficient systems. such as creation of a Continuous Water Quality Monitoring Standard Operating Procedure that helps novice samplers competently use the complex process of calibrating and maintaining the district's high-tech monitoring instruments. The guidelines have made use of the equipment simple and straightforward to understand, which helps ensure sound sampling practices in the field.



RUSS BRINDLE '06 is pictured here on a recent client visit.

Continued on page 36



The Carnage Robotics team, from left, Aidan Irvin, Sean Irvin, Don Price, Monte Keen and Jake Keen gathered around Ultimo Destructo. photo: Malcolm Denemark/Florida Today

Battlebot Builder: Sean Irvin

When Sean Irvin '95, '01 M.S., isn't at work on classified projects for Harris Corp., he's flexing his mechanical muscle designing and driving heavyweight gladiators ... of the robot variety. Irvin and his team, Carnage Robotics, will compete with their robot, Ultimo Destructo, on ABC's "Battlebots," airing this summer. The team gained experience on the battlefield, so to speak, in 2001 and 2002 during the first run of the program that aired on Comedy Central. When Irvin heard about ABC's reboot of the program last summer, he immediately began designing Ultimo Destructo. Following an extensive review of the team's mechanical design, electrical schematics and safety design, a video bio and a background investigation, the team earned a place on the show and started to build. "We had a good basis for our robot," Irvin said. "One thing I learned from the other show is that you really need to have good arena control to outmaneuver the other robots." After the show, the team plans to get to work repairing, enhancing and upgrading their robot for future use. "Our robot is unique in that it can have different weapon pods," said Irvin, "so I will be designing additional pods for fabrication for the next competition."

Watch BattleBots

AIRING: June (Taped Before a live audience April 18—24)

STATION: ABC (in Brevard County WFTV Channel 9)

FOLLOW: Find Carnage Robotics on Facebook and at carnagerobotics.com

MEET SEAN IRVIN: CURRENT CITY: Grant-Valkaria, FL

FAMILY: Wife, Amber, and three children: Aidan, 12: Delaney, 10: Fallon, 4

HOBBIES: Raising backyard chickens, playing the bagpipes, riding his custombuilt Harley

FAVORITE FLORIDA TECH MEMORIES:

Gymkata sessions behind C-Building, playing water polo and other intramurals with my fraternity, Lambda Chi Alpha, building a mini-baja car for senior design, and playing parties with my bands, Harsh Reality and the Bush Pilots!

BEST PART ABOUT BEING A FLORIDA TECH ALUMNUS:

I really love taking my kids to every Florida Tech football home game at Panther Stadium. I love reuniting with other alumni in attendance and meeting new ones.



Melissa Quinn, Sean Quinn '93, Kristin Shahady '15, John Santucci

Washington, D.C.



Lisa White, Jonathan White '81, Karen Barker '93



Edwin Sherman '01, David Atkinson '02, Jimmy Best '15

ALUMNOTES

Continued from page 35



REBECCA MEDVECKY '06 is sharing a lot of happy news. Isaac Cade Medvecky was born June 17, 2014, and joins big sister Emmalyn. Matthew Medvecky (Lambda Chi Alpha) finished his ASN in nursing! And she has returned to Mote Marine Laboratory in Sarasota, Florida, as a staff chemist with the Environmental Laboratory for Forensics program.

TANIA GAY '07 M.S. secured a position with the SAT Prep Group. She will teach proven prep techniques to teenagers and is excited about this opportunity. She is also an avid racquetball player who is ranked in the top 150 players in the country.



BENJAMIN PARDINI '08 and **REBECCA KITTO** '09 welcomed their son, Apollo, December 2014. Ben is a pilot, and Becky is a stay-at-home mom.

AUBREY HEATH '09 received her doctorate from Louisiana State University in chemical engineering. Her dissertation has helped gain a better understanding for fog/smog processes in the natural environment. She is the recipient of this year's LSU Alumni Association Distinguished Dissertation Award in Science. Engineering & Technology. She is currently working as a process engineer at G.R. Stucker and Associates in Baton Rouge, Louisiana.

2010s



KARA BRISCOE '10 MBA welcomed new baby girl Kalea in April 2015 who joins 7-year-old brother Kalel. She is a contract specialist at NAVAIR and the family resides in Southern Maryland.

GAEL LE BRIS '11 M.S. is the airside development manager at Paris-CDG airport (France). Last December, Le Bris recorded a webinar on Safety of Runway Operations during Construction Works with the FAA's Airport Construction Advisory Council (ACAC). Also, he coordinated for the Infrastructure Workgroup of the Alfa-ACI (association of the French-speaking airports) the edition of a guide of reference on the markings and signage of the apron, which constitutes a common position on best practices.

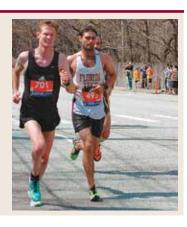
MARIE MCBRIDE '13 has applied to become a NASA astronaut. A record-breaking 18,300 people applied to become one of NASA's 14 newest astronauts. She has wanted to be up in space ever since she got her first telescope.



MONIKA ROLLE '13 took her children Kyla and Karlaton on their first trip to Disney World.

CHRIS CACCIAPAGLIA

'12, a doctoral student in biological sciences and volunteer coach for cross country and distance track, ran the Boston Marathon in April and finished 190th out of 27,487 participants. His time was 2:42.40 with an average pace of 6:13 per mile.





AJA SLATER '13 has a new addition to the family. It has four legs and is a ball of energy. Her name is Maggie.



CHRISTINA MIXON '15 M.S. was promoted to senior business consultant and selected to expand EU business opportunities with a new London office.



KARA SCHMITT '14 Ph.D. and PETER O'DONNELL '12 M.S. got married

Calling All Panther Cubs! If you've

recently welcomed a Panther Cub to your family,



contact us for your free apparel item. Choose from a T-shirt, bib or onesie. Then send us a photo of your child in their Panther swag, and an AlumNote about yourself. We will proudly display it in Florida Tech Today.

For details, email alumnotes@fit.edu

In Memoriam

BARRY GROSSMAN, professor of electrical and computer engineering, passed away in May 2016. He was an integral member of the College of Engineering, serving on the faculty since 1986. He is survived by his wife Bettie, and his two children, Samuel and Bachel.

JUNDA LIN, professor of biological sciences, passed away March 2, 2016. He was a beloved member of the College of Science for many years. Colleagues and friends described him as a man of courage, compassion and intelligence. He is survived by his wife, Fanghua Wanq, and sons Kurt and Kyle.

JOHN T. WILLIAMMEE III passed away Jan. 26, 2016. He shared his expertise as a volunteer with Florida Tech's entrepreneurial program and Indian River Lagoon preservation efforts.



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Mark Cartwright (center) laughing with fellow Hall of Famers Bino Campanini '90, '92 MBA and Robin Chan '91, '93 MBA

Mark Cartwright, Soccer Player Extraordinaire:

On the Pitch of Life

"GooooaaaaaL, GooooaaaaaL, GooooaaaaaL" chanted by the world-famous soccer announcer Andres Cantor would have never been heard when Mark Cartwright, starting goalkeeper for the Florida Tech Panthers, was on the pitch. Well, that is a slight exaggeration but not by much.

Cartwright was an integral part of the winningest period in soccer program history, as Florida Tech went 56-5-2 with three consecutive Sunshine State Conference crowns, the 1991 NCAA Division II National Championship and the program's only undefeated season in 1992 (19-0-1). Not surprisingly, Cartwright went on to be a professional footballer, manager and now technical director at Premier League club Stoke City FC.

Cartwright was part of the English invasion to Florida Tech. Born in Chester, he still calls England home. During the years at Florida Tech, he attributes the coaches and players for creating his second home.

Cartwright is one of the men at the heart of Giannelli Imbula's recent record signing to Stoke City for a reported £18.3 million. He admits he still has to pinch himself whenever he takes a step back from his role at Stoke City. According to Cartwright, "The club is going in the right direction, and it's a great place to be for soccer." Most would agree, Cartwright is in the elite of the pro soccer management world.

He worked as a football agent for the past 10 years, focusing on player recruitment and talent management. He established and ran his own agency business, before joining Beswicks Sports, a leading firm of football (soccer) agents.

"Because of my educational background, some lads I played with started ringing me for advice on contracts. I started passing them onto agents, until one player asked if I wanted to do it," shared Cartwright. His first big break came from joining Petteries-based law firm Beswicks, which led to his dream job with Stoke City FC.

Cartwright works closely with first team manager Mark Hughes, former Manchester United, Barcelona, Chelsea star, and chief executive Tony Scholes. Cartwright heads up the football club's worldwide scouting and player recruitment department. He has represented a number of championship and premier league players. "If I didn't come to FIT, I wouldn't be where I am now. Coming here, I evolved as a person and a player," said Cartwright.

-Stephanie Bacon

MEET MARK CARTWRIGHT

CURRENTLY LIVING IN: England

CHALLENGING TIMES: Cartwright's career was prematurely brought to a halt at the age of 31. For him, an absolute tragedy. Cartwright, now 43, spent his soccer professional playing career with Wrexham, Brighton, Shrewsbury and Leek Town teams before a knee injury ended it all. However, a Florida Tech business education presented him with the skills and opportunity to remain in the game as an agent.

BEST PART ABOUT BEING A FLORIDA TECH ALUMNUS:

Having been lucky enough to have undertaken a scholarship at FIT and winning a national championship I can only endorse the opportunity to be part of collegiate soccer in America. If I hadn't taken the chance to come to America, I certainly wouldn't have played professional football in England, and I most definitely would not be where I am today, standing in front of friends and colleagues accepting the Florida Tech Hall of Fame award.

News from the desk of

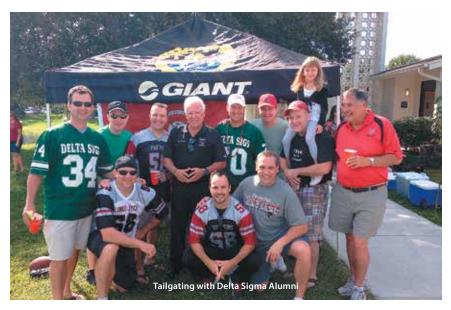
Bino Campanini '90, '92 MBA

Vice President for Alumni Relations and Executive Director, Alumni Association









At the time of writing this article, I am preparing to embark on my two last alumni receptions with Dr. Catanese as president of Florida Tech.

I have hosted close to 100 receptions with Dr. Catanese, meeting with alumni from every decade since our inception in 1958 and from every college and extended learning site. In recent years, we have also had the pleasure of meeting our online alumni at our receptions as well as prospective students. We have travelled all across the country meeting our alumni in Seattle, San Diego, Dallas, Houston, Boston, New York City, as well as Chicago and Philadelphia to name a few of our key locations. We have hosted alumni in London and Dubai in an effort to stay connnected with our international alumni. The commitment Dr. Catanese has demonstrated in engaging with alumni and sharing news with you about your alma mater has been remarkable.

But it is not just alumni receptions. Dr. Catanese has always been willing and available to support the efforts of the Alumni Association. He not only lends the support of the President's Office, but he takes an interest in our activities and gets personally involved. He has ran our FIT Homecoming 5K (consistently winning his age group), he shows up downtown for FIT Homecoming Fest, attends our Legacy Breakfast and Julius Montgomery Pioneer Awards, and even shows up, and lends his musical talents, at our Alumni Concert Series.

On a personal note, I really enjoyed working with Dr. Catanese over the last six years. I know our alumni from all over the world join me in thanking him for his commitment to us. We wish him the best of luck in his future endeavors. I look forward to working with Dr. McCay to further elevate, engage and connect with alumni.

Go Panthers,

Bino







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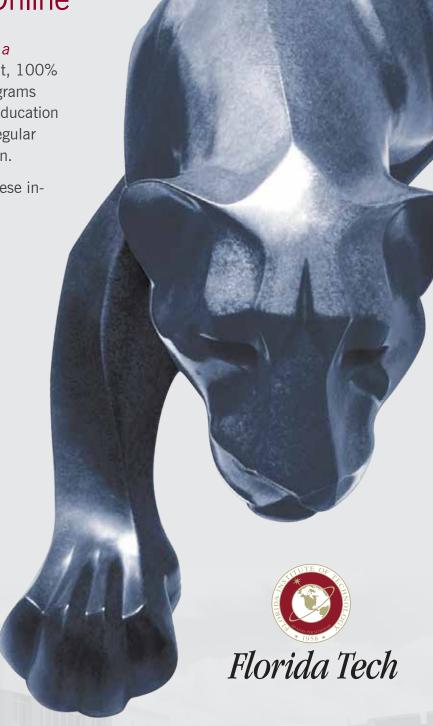
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Management

Marketing

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Supply Chain Management



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Summertime Fun ...

What are your Florida Tech pool party memories?

Are you in this 1976 photo?

Photo credit: Harry P. Weber University Archives, Ad Astra 1976, Volume VIII, p. 6–7.

Tell us about it at fltechtoday@fit.edu

