Scientific ZOOlaboration

Partnerships with the Brevard Zoo connect students with hands-on science.
Mars ... Why Bother?
Daniel Batchelder, head of the department of physics and space sciences, ponders the next great space frontier.

Scientific ZOOlaboration
Partnerships with the Brevard Zoo connect students with hands-on science.

Don’t Call Them Drones
As uses for unmanned aerial vehicles span beyond their military heritage, a new academic minor at Florida Tech prepares students for this emerging industry.

The Brothers Otero
These alumni faculty members reflect on returning to Florida Tech, their shared dedication to their disciplines and the value of family.
Tanabe Shōchiku III, a fourth generation bamboo artist from Japan, demonstrated the art of bamboo at the Panthereum in April in connection with the Ruth Funk Center for Textile Arts’ exhibit Modern Twist: Contemporary Japanese Bamboo Art. Although bamboo is a prolific natural resource, it is a challenging artistic medium. There are fewer than 100 professional bamboo artists in Japan today. Mastering the art form requires decades of meticulous practice while learning how to harvest, split and plait the bamboo.
Dear Florida Tech Alumni and Friends,

We’ve just enjoyed the conclusion of another outstanding academic year at Florida Tech. This issue of Florida Tech Today shares some of those stories for your enjoyment. I’d like to highlight a few here of which I’m particularly proud.

Academically, nearly 1,300 degrees were awarded to students from 32 states and 61 countries at Spring Commencement, a record year for us. It’s always a privilege to bestow these diplomas and meet the smiling graduates and their proud families.

A new study by the well-respected Brookings Institution in Washington, D.C., confirms Florida Tech as one of the top 100 universities in the nation for boosting alumni earnings. The Brookings analysis ranks Florida Tech at #94 nationally for four-year schools and #1 in Florida. The study crunched data on economic outcomes for graduates and captured the contributions that the colleges themselves make to their graduates’ eventual economic success.

It’s been a phenomenal spring for Panther athletics. In rowing, the men’s varsity eight overpowered Michigan in a dead sprint to the finish line to win the Aberdeen Dad Vail Regatta. For the first time in 27 years, we are again Dad Vail Champions. The excitement along the Schuylkill River was truly electric. Meanwhile, the same weekend, our softball team won its first-ever NCAA Regional Championship. Their success makes us all proud to be Panthers.

I hope you have a wonderful summer.

Sincerely yours,

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

President Catanese and members of the Florida Tech Jazz Syndicate at a spring performance.
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 fltechtoday@fit.edu.

REMINISCING ON THE EARLY DAYS

“I started at FIT as a freshman in the fall of 1966. I believe that was the first year the school had been renamed from Brevard Engineering College to Florida Institute of Technology. I didn’t graduate though until December 1978.

When I started in 1966 the only classrooms were the four westernmost buildings of the old quadrangle and the old administration building on the west end of them. The two easternmost buildings were still under construction. The old library was there as was Brownlie and Shaw dormitories. The other three dorms similar to Shaw were named simply South, North and West and were in various stages of construction.

The chemistry class used orange juice cans as calorimeters, and there was no computer on campus, but there were two rooms on the second floor of the library where mechanical calculators were available for use. The Jungle had no paved walks and was really still very wild.

Orientation for the freshman class included a movie on the grass in the quadrangle to view films of rocket failures from the space center. The cost for a 10-week quarter—including tuition, room and board—was about $800!

— Daryl Crandall ’78

FAMILIAR FACES

“It is always with much pleasure we read and enthuse over Florida Tech Today. But the recently arrived winter copy was a special treat for we found three very familiar, handsome faces from Harris Corp.—Dr. Joseph A. Boyd, John T. Hartley and Phillip W. Farmer.

We were always proud of their excellent leadership at Harris and enjoyed them as friends on many occasions. To see they are still sharing their many talents plus treasure is an inspiration to all. Melbourne and FIT are truly blessed.

Although we do not know William Brown, we think the Harris stock reflects excellence on current leadership.

Congratulations to all!”

— Margaret and Herb McCauley

In April, SAM FARRAR ’69, who delighted in seeing his name on the historic ball used in FIT’s first men’s basketball victory that is included in the University Archives, visited campus. University archivist ERIN MAHANEY accepted his “Engineers” letter jacket into the archives collection.

#PARTICIPATIONMATTERS

ALUMNI SURVEY COMING THIS SUMMER!

WE WANT TO HEAR FROM YOU!
ON CAMPUS

Enriching Research

What If There Were No Moon?

This question lies at the heart of a unique program that brings Florida Tech’s STEM expertise into thousands of classrooms in Florida and across the country. Designed to spark the interest of high school students in the critical disciplines of science, technology, engineering and mathematics, the program provides teachers with an information-packed poster for the classroom along with a lesson plan highlighting ways to use math, physics and even geology to calculate the mass of the moon. The STEM poster project is a free initiative sponsored by the university’s Office of Enrollment Management with its scientific content overseen by Hamid Rassoul, dean of the College of Science.

Learn more about the program at fit.edu/stem-poster.

“The initiative is designed to help teachers in their daily efforts to engage and excite students about the STEM disciplines.”

—Daniel Batcheldor, physics and space sciences department head, who worked with faculty members Catherine Neish and Darin Ragozzine on the development of the moon poster and lesson plan.

Time Capsule to Mars

A Student-Driven Interplanetary Mission

CASSIDY CHAN ’15 and a team of other Florida Tech students are part of the world’s first privately funded and student-led interplanetary mission to Mars through one of the largest crowd-funding campaigns in history: Time Capsule to Mars (TC2M). Together with student-led teams from other participating universities, they are working to design, build, launch, navigate and land a CubeSat-based spacecraft on Mars. Chan is the project’s lead systems engineer.

The project is an initiative of Explore Mars Inc., a nonprofit created to advance the goal of sending a human to Mars within the next 20 years. “What distinguishes this project is that it is all student-led,” says HAMID HEFAZI, mechanical and aerospace engineering department head. “[The students] are in charge of making the decisions, and faculty is just playing the role of advisor. This is a new way to not only learn technical competencies, but also technical management, and makes it a very interesting educational tool.”

Learn more about the project and Florida Tech’s role at http://bit.ly/1JbWasp.

What Will the Time Capsule Hold?

With the ability to accept digital content from millions of people around the globe, the time capsule will feature a gallery of crowd-sourced photos, videos and audio files. With a goal to launch by 2019, the capsule will travel through space and land intact on Mars for future human explorers to recover.

If you want to participate, visit timecapsuletomars.com/#upload to donate to the project and upload your image, audio or video files.

Cyber Infrastructure Defense

Associate professor Marco Carvalho was awarded a $730,000, two-year contract by the Department of Homeland Security, Science and Technology Directorate to design a cyber-defense framework that will allow multiple organizations in both civilian and government sectors unprecedented levels of coordination in their efforts to protect the nation’s cyber infrastructure.

From the Ground Up

A team of Florida Tech researchers led by associate professor Ningyu Liu captured rare video of hard-to-predict upward-moving lightning discharges, allowing for the study of this phenomenon in a way that has not been previously possible. The study and accompanying video were published in the January 2015 edition of Nature Communications.
EXPERT ADVICE:

Enchanting Aquariums

Did you know Florida Tech is home to three 200-gallon saltwater aquariums? Located in the lobbies of Panther Dining Hall, the Link Building and the President’s Office, each features a display of sustainable species maintained by oceanography students under the supervision of Associate Professor Kevin Johnson. For hobbyists, guidelines to ensure your own fish and flora flourish vary depending on the type of tank—freshwater or saltwater, coral concentrated or fish friendly, but Johnson recommends all aquarists consider the following:

- **THE GREAT SECRET** for the successful aquarist: frequent water changes!
- **SALTWATER IS MUCH MORE EXPENSIVE** than freshwater (including the fish, the equipment and the maintenance), with reef tanks being the most expensive.
- **BE CAREFUL NOT TO OVERFEED.** Uneaten food that decays in the gravel adds nutrients and contributes to chemical and visual problems in a tank.
- **SUPPORT SUSTAINABILITY.** Be a responsible aquarist and feature sustainable ornamental animals that are harvested in a sustainable fashion, or are captive bred/tank raised. Do not contribute to an aquarium trade where endangered natural reefs are pillaged for rare and threatened species.

Undergraduate environmental science major Kate Beckett monitors water quality and cares for fish and corals in the Panther Dining Hall aquarium.

FIBER ARTS WITH POP!

On view this summer, May 16—Aug. 22, at the Ruth Funk Center for Textile Arts is Southern Accents, a juried quilt exhibit featuring work submitted by Studio Art Quilt Associates (SAQA) members living in the Southeast. Quilts ponder the question: “What makes life in this part of the country special?”

At the Foosaner Art Museum, May 30—Aug. 30, is Pop Art in America, an exhibition drawn from the collection of the NSU Art Museum Fort Lauderdale. It includes works by the artists central to the American Pop Art movement: Andy Warhol, Roy Lichtenstein, James Rosenquist, Larry Rivers, Jim Dine and Robert Indiana.

For more, visit textiles.fit.edu and foosanerartmuseum.org.

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What's In A Name?

EXPANSION OF HUMANITIES AND COMMUNICATION ON CAMPUS

Most American research universities follow a basic hierarchical structure of academic units: the university may house multiple colleges; each college, in turn, may house schools of specialized study; and the schools may contain a number of separate, focused departments.

Recently, Florida Tech’s department of humanities and communication was promoted to the School of Arts and Communication (SAC), a division of the College of Psychology and Liberal Arts (CoPLA).

The SAC has the unique distinction of being the only program at the university that touches every undergraduate at some point in his or her matriculation, regardless of academic major.

“Becoming a school strengthens our muscle, so to speak, in carrying out our mission of empowering students to join a world-class community of scholars,” explains ROBERT TAYLOR, SAC head and CoPLA associate dean.

“This new designation is recognition of our breadth, depth and the major role we play in students’ educational careers at Florida Tech.”

The university’s board of trustees approved the status change as part of the strategic plan. But while the new designation became official in the summer of 2013, it has taken the last year for students, faculty and the public to notice the difference.

“We have grown so much, and with that growth, we’ve gained visibility and developed a lot more programs that have impacted the campus as a whole,” says HEIDI HATFIELD EDWARDS, SAC associate head and communication program chair.

Among these offerings is the university’s music program, with its associated ensembles and public concerts as well as expanded course work in languages, law and textiles.

Edwards predicts the SAC will see more growth, coupled with a continued dedication to the core curriculum for the university.

ONE TO WATCH: TABITHA BEAVERS

“I identified a need, then I put my passion for engineering to work in meeting that need.”

—TABITHA BEAVERS ’15 developed a machine-learning electrode designed to increase placement accuracy during ECG monitoring as a result of a personal health experience. She also opened a nonprofit makerspace, Project Based Learning, adjacent to campus in University Plaza. She describes the center as a mix between a vocational learning, innovation and do-it-yourself center: offering access to 3-D printers, instruction and materials.

PINK POWER

BLAIR KANIA ’15 and her Formula Society of Automotive Engineers (SAE) team partnered with the National Breast Cancer Foundation to design and build the first-ever Formula SAE race car to raise awareness for breast cancer. The team’s “panther in pink” race car competed at the Michigan International Speedway in May. Read more about the project at floridatechmotorsports.com.
Embracing iLearning

iPads are joining more traditional educational tools in a number of Florida Institute of Technology classrooms as a program pairing faculty with the versatile Apple tablets continues to excite participants about the power of technology to engage students and enliven the teaching process.

Started three years ago by University Professor MARY BONHOMME, the program has since provided iPads to 28 faculty members chosen from a larger pool of interested faculty, all of whom had to submit proposals for how they would use the device in their teaching.

Given the rising presence of smart phones and tablets, Bonhomme said, it makes sense to explore how to incorporate iPads into teaching.

“You have students who have grown up with this technology, and if we’re not learning to embrace it, to enhance and supplement the teaching and learning environment, I think we’re going to have some students who are not excited by the idea of learning,” Bonhomme said.

DEBBIE LELEKIS, an assistant professor of English who had never used an Apple product, began using the iPad in her spring semester humanities elective, “Science, Technology and the American Narrative.”

Using presentation software like Prezi, making video clips and faux movie trailers of student projects, gathering related articles and content with her students on Pearltrees.com—the integration of the iPad and the utilization of its capabilities has been smooth and encouraging for Lelekis.

And it has allowed her to offer more creative ways of teaching while adding another level of connection for her students.

“This is a way for them, through technology, to get connected, to engage, to be active learners rather than passively sit there and listen to me lecture,” she said.

JARED CAMPBELL, an instructional technologist at Florida Tech who was instrumental in developing the curriculum for the iPad program, said the devices—and educational technology in general—should be about simplifying and amplifying the act of teaching.

That’s happening with the iPads. “It’s been a really good experience for everybody,” he said. “I feel like it’s been a great success.”

Debbie Lelekis works with students using the Haiku Deck app during a discussion of the nature of time and the erosion of order in relation to Ray Bradbury’s story “A Sound of Thunder.”

“...through technology, to get connected, to engage, to be active learners rather than passively sit there and listen to me lecture.”

In the LEED

The Panther Aquatic Center earned LEED Silver New Construction Certification from the Green Building Certification Institute this spring. The facility, featuring a geothermal energy system, is one of the only certified sustainable pools in Florida.

From left: Faculty members Aliska Gibbins, Dan Zaffran and Julie Costopolous incorporate iPads among their instructional tools.

PEGASAS TAKES FLIGHT

The College of Aeronautics was selected to be part of PEGASAS, the Partnership to Enhance General Aviation Safety, Accessibility and Sustainability. The 10-year partnership brings together the top universities in aviation research to help the Federal Aviation Administration improve the field.
ON CAMPUS

Sindel Memorial Scholarship

The Scott Matthew Sindel Scholarship at Florida Tech has been established in memory of SCOTT SINDEL ’04. The scholarship will benefit an outstanding upperclassman in the College of Aeronautics.

Sindel’s love for aviation began at the age of 2, when his grandfather took him to Port Columbus International Airport every Sunday morning to watch airplanes. Sindel enrolled in the aviation management program at Florida Tech in 2002 and was diagnosed with adenoid cystic carcinoma, a rare form of cancer, in 2003. He graduated with honors in 2004 and became a flight instructor at FIT Aviation, training students in both single and multiengine aircraft.

After 18 months of instructing, he was hired by ExpressJet Airlines where he flew Embraer 135-145 regional jet aircraft. In November of 2006, Sindel was hired by Spirit Airlines, flying the Airbus A319, A320 and A321 series aircraft. During his 12-year battle with cancer, he fought to regain his FAA medical certificate twice and returned to flying. He passed away on July 12, 2014, at the age of 32. He was surrounded by his parents Linda and Spence Sindel, loved ones and friends.

Jake Owen Foundation Grant to Vero Autism Clinic

The Jake Owen Foundation has donated $25,000 to Florida Tech’s Scott Center for Autism Treatment clinic in Vero Beach to cover the costs of diagnosing and treating children of families living in Indian River County who lack the financial resources to afford diagnostic and treatment services and who may be uninsured or underinsured.

A native of Vero Beach, country music star Jake Owen returns every year to hold a concert to benefit his foundation. Established in 2010, Owen’s foundation is focused on assisting children in Indian River County and nationally who are battling cancer and other childhood diseases. Owen has been a supporter of the Boys & Girls Club of Indian River County and St. Jude’s Children’s Hospital as well as many other charitable causes impacting children.

BISK COLLEGE OF BUSINESS RECEIVES $10,000 GIFT FROM SUNTRUST

The SunTrust Foundation has donated $10,000 to the Bisk College of Business in support of the Student Business Incubator program. “The SunTrust gift allows our business students to explore their entrepreneurial spirit,” said Dean Annie Becker. “by creating ideas and innovating solutions during their academic careers at Florida Tech. Community support is key to educating our future entrepreneurial leaders to manage innovation and change in a global environment.” The gift will be used to boost technology in the classroom and underwrite additional innovation events at the college.

Behind the Scenes

The university’s Central Energy Plant, located adjacent to the Link Building, houses two 500-ton chillers to cool 12 major campus buildings. The 1,000 ton energy-efficient plant averages a .65 Kw per ton electrical usage and occasionally hosts educational tours, such as Florida Tech students studying mechanical systems or members of the Space Coast Chapter of the American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE).

1 The chillers use Danfoss Turbocor compressors. This technology provides oil-less, frictionless, variable speed compression that is energy efficient, compact, lightweight and quiet.

2 The chillers provide central chilled water (ranging in temperature from 42ºF to 46ºF) for air cooling year-round for:
   - Crawford Building
   - Skurla Hall
   - Keuper Building
   - Denius Student Center
   - Evans Library
   - Ruth Funk Center for Textile Arts
   - Link Building
   - Gleason Performing Arts Center
   - WFIT
   - Clemente Center
   - Panther Aquatic Center
   - Panther Dining Hall

   The buildings comprise more than 300,000 square feet of campus space.

3 The touchscreen display provides the operator with real-time running parameters and parameter change capabilities.

4 The green pipes provide condenser water to and from cooling towers on the roof.

5 The silver pipes carry chilled water from the plant to the outlying buildings via directional bore underground piping.
ON CAMPUS

Create the Future Campaign News

Phebuses Gift $5M to Endowed Scholarship Fund
Robert ’74 and Deborah Phebus make pace-setting bequest.

Rob Phebus’ career spanned four continents, but in reality, he was never far from his alma mater. After graduating from Florida Tech’s fledgling College of Business in 1974 then obtaining an MBA from Notre Dame, Phebus began a 32-year career at Ford Motor Company. Balancing his corporate executive responsibilities, he still found time to serve on the FIT alumni board and served two terms as its president. He now serves as vice chairman of the board of trustees. In 2000, he and his wife, Deborah, established the Phebus Family Endowed Scholarship with a gift of appreciated stock valued at more than $160,000.

They hoped that one day the fund would provide a full-tuition scholarship to a deserving student, based not on financial need, but on scholastic merit. Now, with their $5 million commitment to the endowment, the future interest earnings on the Phebus Family Endowed Scholarship fund may make half a dozen full-tuition scholarships possible.

“This is a pace-setting bequest reflective of the future that is Florida Tech,” said President ANTHONY J. CATANES. “Every great university is distinguished by the commitment of its alumni who ensure that the traditions of their alma mater not only continue, but flourish.”

—President Anthony J. Catanese

Deborah and Robert Phebus

CAVALLUCCI-STROUSE FAMILY: Supporting Ethics and Leadership Studies
Eugene “Gene” Cavallucci and Rebecca “Becky” Cavallucci have established the Cavallucci-Strouse Family Endowment for Ethics and Leadership at Florida Tech. The fund will assist the Business Center for Ethics and Leadership in the Nathan Bisk College of Business. Cavallucci is the retired counsel for Harris Corp. and has been a long-time advisor to the Bisk College of Business Center for Ethics and Leadership at Florida Tech.

“Promoting ethical behavior and leadership standards is an integral part of the Bisk College of Business’ mission,” says Dean ANNIE BECKER. “and the Cavalluccis’ generosity and leadership in this area will allow us to provide exceptional programming for tomorrow’s leaders in perpetuity.”

—SS

Deborah and Robert Phebus

INAGURAL ACQUISITION FUND
Dr. David and Mrs. Midge Dunn have established the Foosaner Art Museum’s first Acquisition Fund to benefit the permanent collection of the museum. Announced to a crowd of Renaissance Society members at the Society’s spring gathering, the endowment fund earnings will be used to purchase and acquire art for the Foosaner Art Museum. The Dunns are active members of the Renaissance Society and long-time supporters of the Foosaner and the Ruth Funk Center for Textile Arts.

COLLECTIONS MANAGEMENT INTERNSHIP
Mrs. Laurie and Mr. Fayette “Brownie” Brown III have established the first Collections Management Internship fund to benefit the Foosaner Art Museum at Florida Tech. The fund will provide a stipend for an intern to assist in collections management at the Foosaner for the 2015–16 academic year. The Browns have contributed several gifts of art to the Ruth Funk Center for Textile Arts, are members of the Renaissance Society of the Foosaner Art Museum and long-time supporters of both museums.

ONLINE EXTRA
Read more about these gifts at today.fit.edu
Arbor Day Tree Planting

To celebrate Florida Arbor Day and our membership in Arbor Day Foundations’ Tree Campus USA Program, Pete the Panther and the facilities team planted a sweetbay magnolia. Not too long from now you’ll be able to enjoy the sweet vanilla scent of its flowers near the Panthereum.

Construction Management Goes Green for Greeks

Students in Florida Tech’s construction management program recently teamed up with the Chi Phi fraternity to design a future off-campus housing facility with sustainability in mind. The results were shared via a virtual “walk through” and 3-D model on display during the Northrop Grumman Engineering and Science Student Design Showcase in April. Read more about the project at http://bit.ly/1QxJ2O4.

Chopper Dropper

MARCH 13, 2015 | SUNTREE COUNTRY CLUB

2,000
golf balls

1,400
attendees

152
golfers

550
student-athletes

22
sports

$600,000
raised

Botanical Fest

Over 6,000 attendees flocked to campus on March 7, 2015, for the 10th annual Botanical Fest, which for the first time, included seminars on topics such as backyard chickens and veggie gardening in Florida.

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FIT HOMECOMING 2015

PAINT DOWNTOWN CRIMSON AND GRAY

Thursday, Nov. 5
FIT Homecoming 5K

Friday, Nov. 6
FIT Homecoming Fest

Saturday, Nov. 7
Parade
Tailgating on campus
Football FIT vs. W. Georgia
FIT Homecoming Gala

BE A PART OF THE TRADITION

For more information on your official class ring, please visit us online or call 1-866-225-3687.

Florida Institute of Technology
High Tech with a Human Touch™
Mars ...
Why Bother?

Mars has captivated our curiosity for millennia. Its occasional retrograde motion and fiery appearance ensured Mars became deeply embedded and deified in many cultures. Observations with our first telescopes added to its allure; the poor optics led scientists to claim the presence of canal-like structures (canali) on its surface and postulate the presence of Martian life. This resulted in an explosion of Mars-based science fiction literature and film.

Our Mars enthusiasm continues to this day. Plans are afoot to land humans on its surface within the lifetime of current undergraduates. However, like the illusions of the canali, is such a venture feasible, and are there any tangible benefits for those of us remaining on Earth?

The Apollo missions demonstrated that setting lofty goals is the best way to drive technological advancement and inspire the next generation of scientists, technologists, engineers, artists and mathematicians. At this point in human history, Mars is the loftiest goal. So, now that humans have been to the moon several times, robotic missions are becoming regular and we have a continuous presence in the International Space Station (ISS), the next logical goal is crewed visits to other planetary bodies. The ultimate survivability of our species will depend on us being able to leave Earth for good, and there is no time like the present to start on that process.

There are still many tasks that rovers and robots cannot carry out, and so directly conducting experiments on the surface of another planet will open up a new “discovery space” and establish new branches of science like astrogeology. However, getting any humans there (alive) isn’t easy. The radiation environment of interplanetary space and multiple years in a sub-g environment cause irreparable damage to the human body. However, these challenges push our species forward into a more advanced and prosperous future. They will be solved one step at a time, with continued studies aboard ISS and missions to near-Earth asteroids. Apollo was our species simply stretching its space legs. ISS has us standing on our feet. Soon we really will be taking that giant leap for humankind.

Daniel Batcheldor is the department head of physics and space sciences. His research focuses on supermassive black holes and their role in the evolution of galaxies, and on space-based instrumentation for extreme contrast ratio applications.
Sports Hall of Fame Class of 2015

Three individuals and two teams were inducted into the Florida Tech Sports Hall of Fame on Feb. 20, 2015. In front of a large and excited crowd in the Hartley Room at the Denius Student Center, Jonathan Baksh, Sara Trané, Kari Wanat, the 1974–75 men's varsity lightweight eight and the 1989–90 men's basketball team were welcomed as the newest members into the hall.

Jonathan Baksh

Baksh put together one of the finest baseball careers in Florida Tech history, holding Panther records in career batting average (.412), single-season batting average (.469), single-season games played (55), single-season hits (100), single-season doubles (21), single-season slugging percentage (.732) and single-season on-base percentage (.523).

He was named NCBWA All-American twice, earning a third team selection in 2005 and making the first team in 2006. Baksh garnered ABCA and Rawlings All-American Second Team honors in 2006 and First Team All-Sunshine State Conference in 2005 and 2006.

Following his Panther career, he was selected by the Toronto Blue Jays in the seventh round of the 2006 MLB draft, the highest selection in FIT baseball's program history.

Sara Trané

Trané came to FIT after a successful career at Washington State University. Though she only competed for the Panthers for one season, she left quite a mark on the cross country program.

After winning two races during the regular season, Trané topped the competition at the Sunshine State Conference Championship, registering a time of 21:10.32 in the 6K race to earn SSC Runner of the Year. She wasn't done.

She then broke the tape at the NCAA Division II South Region Championship at 21:37.00, garnering FIT's first-ever region championship and USTFCCCA South Region Athlete of the Year laurel. Trané placed 18th at the NCAA Division II Championship, chiming in at 21:29.00 to become the first Panther cross country runner to achieve All-American status.

Kari Wanat

One of the most accomplished volleyball players in FIT history, Wanat was a two-time Second Team All-Sunshine State Conference selection. She led the SSC in digs in 1997 with 555 and again in 1998 with 505. She is FIT's all-time leader in digs, accumulating 1,791 during her career, second most in SSC history.

Wanat was not only a stellar player on the court, she was also an exceptional student in the classroom. She was named GTE Second Team Academic All-American in 1998 and first team in 1999. She was also an all-region academic first team honoree three straight years from 1997–99. A two-time SSC Scholar Athlete of the Year, taking home the honor in 1999 and 2000, Wanat graduated from FIT with a 4.0 GPA in molecular biology.

1974–75 Men's Varsity Lightweight Eight

Coached by athletic director Bill Jurgens, the 1974–75 men's varsity lightweight eight was FIT's first varsity crew to win gold at the Dad Vail Regatta.

The crew of coxswain Gene Jeffords, stroke Tom DeLuna, seven-seat Skip Schied, six-seat Steve Wright, five-seat Andy Doan, four-seat Bob Stickler, three-seat Bill Alonso, two-seat Doug Engler and bow Gene Ferraro helped the men's team finish second overall in the Dad Vail Regatta points trophy in 1975.

1989–90 Men's Basketball Team

The 1989–90 men's basketball team took home FIT's first-ever Sunshine State Conference Regular Season Championship, finishing 26-4 overall and 11-1 in conference. The Panthers advanced to the second round of the 1990 NCAA Tournament, garnering the school's very first NCAA tournament win.

The team included head coach Tom Folliard Sr.; assistant coaches Kevin Dunne, Tom Folliard Jr. and Al Skellet; and players Dwight Walton, Davon Kelly, Astley Smith, Robert Sewell, Ray Paprocky, Chris Rose, Igor Beros, Mike Smith, Dave Love, Jamie Lathrop, Dave Murphy, Doug Newbert, Craig Burnett, Jim Krantz, Joe McManus and honorary member Arthur Jackson.

—Mitch Praxl
In just its fourth season, the men’s lacrosse team finished with a 12-4 record. They had a seven-game win streak and were ranked in the top 15 nationally during the second half of the season.

The baseball team earned a trip to the NCAA Division II Championship Tournament for the fourth time in eight years. They won their first 17 games of the season, marking their best start in program history.

Softball earned the program’s first-ever trip to the NCAA Division II Tournament and won the South Region II Championship over 19th-ranked North Alabama, 4-2.

The men’s varsity eight won the program’s third Dad Vail Regatta Championship and its first since 1988. They rowed through the University of Michigan in the last 40 meters to beat the Wolverines by just over seven-tenths of a second.

Redshirt freshman RACHEL TOBIN (pictured) and ALEXIS SANTIAGO qualified as individuals for the NCAA Track & Field Championships. Tobin qualified in the 100 and 200-meter dash and Santiago in the 100-meter hurdles.

The baseball team earned a trip to the NCAA Division II Championship Tournament for the fourth time in eight years. They won their first 17 games of the season, marking their best start in program history.

FOOTBALL KIDS CLINIC
Prior to its annual spring game, the football team hosted a free kids clinic, where future Panthers learned about football and went through drills with current Panthers at Palm Bay High School’s Pirate Stadium.

INAUGURAL SEASON
Women’s lacrosse wrapped up its inaugural season with a 7-9 record. ALLIE MODICA was selected to the all-region’s third team for scoring 51 goals and handing out 17 assists.

SWIMMING STANDOUTS
Joined by head coach JUSTIN ANDRADE, DAR RAZ and NIR BARNEA became Florida Tech’s first swimmers to qualify for the NCAA Division II Championship. A few weeks prior, Raz won FIT’s first-ever gold medal at the Sunshine State Conference Championship in the 100-yard backstroke.

JOIN THE FUTURE PANTHERS – JOIN THE CLUB TODAY!
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“Brevard Zoo is active in applied conservation and conservation education but relies on external scientists to inform our work. Florida Tech is home to a diverse and accomplished faculty ... [whose] presence in the community is critical to keeping local stakeholders focused on science-based decisions.”

—Keith Wisten, Brevard Zoo executive director

Scientific ZOOlaboration

PARTNERSHIPS WITH THE BREVARD ZOO CONNECT STUDENTS WITH HANDS-ON SCIENCE

What do you get when you have a top-notch institution of higher education and research and a zoo that is a world-recognized leader in conservation within miles of each other?

A harmonious relationship that results in hundreds of students, scientists, community members and, not to mention, animals all benefitting from these minds colliding. Florida Tech and the Brevard Zoo have developed a long-standing relationship, but over the past several years, efforts have been stepped up to strengthen the bond. 

MICHAEL GRACE, senior associate dean of Florida Tech’s College of Science, is spearheading the charge.

“We’ve decided it’s time to do more. It only makes sense,” Grace said. “We believe we can capitalize on the unique opportunities that both institutions have to offer and better our community.”

Student Collaboration

More and more Florida Tech students are getting involved in different projects and research opportunities the zoo offers, while the zoo is benefitting from the university’s eager students and brilliant minds. Grace wants to make sure Florida Tech students are aware of the phenomenal, hands-on opportunities that are available so close to the university and that the community recognizes the fantastic work that is being done.

“We’ve always had a great working relationship, and we do wonderful things together,” Grace said. “Michelle Smurl (Brevard Zoo’s director of animal programs) and I started pushing forward on collaborative research a few years ago. We’re excited about the progress we’ve made so far, and now we want to ramp up the number and the depth of projects our two institutions do together.”

Keith Wisten, executive director for the zoo, concurs. He is eager to see expanded student collaborations, such as zoo visits integrated into relevant curricula.

“We are a perfect fit for ethology or ecology classes,” he said.

AMY FENWICK REAUME ’08 passed the Brevard Zoo every day while she was a college student at Florida Tech back in the mid 2000s. While earning a bachelor’s degree in biological sciences/aquaculture track, Reaume was completely unaware of the long-standing relationship her university had with the zoo and the opportunities available to students.

In fact, she had only been to the zoo one time—to take photos for a photography class at Merritt Island High.

“I didn’t realize the amazing work that many zoos are doing in conservation and educating the public about environmental issues,” Reaume said.

Through a series of well-timed events, she began working at the zoo in January 2009, one month after graduating, as the lead aquarist for the Indian River Lagoon exhibit that was set to open in February 2009. Her current role at the zoo is conservation coordinator.

“I am so happy that fate brought me to Brevard Zoo because I truly feel like I have found my niche sharing a passion for wildlife...
Left: Sarah Hasson, Brevard Zoo education animal care specialist, records the weight of a Perdido Key beach mouse.

Right: Sherri Emer ’13 Ph.D. holds an albino Burmese python.
conservation with our guests and the community,” she said. “Brevard Zoo is a perfect partner to share the great research that Florida Tech is doing in a way that the general public can understand and how that research impacts all of us. Likewise, Florida Tech is a perfect partner for Brevard Zoo to aid in research that benefits our animal ambassadors, as well as their native habitats, and in situ conservation programs. All of this offers amazing opportunities for students to get involved right in their own backyard! These experiences are so important and can play a huge role in shaping the direction of a student's career.”

It gives her great joy when her job allows her to work with Florida Tech students and help expose them to all the great opportunities the zoo offers.

“You can see the excitement in their eyes,” Reaume said. “It’s the experience of a lifetime for students.”

Now she’s one of two zoo employees, along with Florida Tech’s Grace, who helps facilitate one of the longest running collaborations between the two entities: Science Café.

Community Collaboration

Science Café is an informal gathering where major science issues are discussed with the help of an expert in the field. They are held the second Wednesday of each month at Tradewinds Restaurant at Duran Golf Club.

The events are free and the format is not a lecture, but rather a forum for exploring new frontiers in science and technology. Attendees have a chance to learn and mingle with accomplished scientists and others who share the same interests.

Topics have ranged from concussions in sports to ecology and conservation in the Galapagos Islands to the emergence of harmful algal blooms as health threats to marine wildlife.

Among other outreach activities, Florida Tech students help run some of the most popular events at the zoo. Boo at the Zoo is a crowd-favorite Halloween-themed event held every October at the zoo. Students from Florida Tech’s chapter of the Tri Beta Biological Honor Society dress up and entertain children along the haunted trails.

Grace and his students also work closely with the zoo to help put on the successful Cold Blooded Weekend, held over the Labor Day holiday. The special event celebrates cold-blooded creatures such as reptiles, amphibians and fish.

“We set up in the lodge and provide a large educational display,” Grace said. “One year we featured snakes, while another year we educated the public about invasive species. It’s great for our students because they are the ones managing the exhibits and discussing the issues.”

Research Collaboration

Florida Tech students and faculty members also are involved in many behind-the-scenes research projects.

Zoo veterinarian Trevor Zachariah collaborates with Florida Tech on several projects, including examining the blood chemistry of snakes and analyzing the infrared imaging systems of boas, pythons and pit vipers.

“This is the best IR sensor on the planet, and we are working to understand how it operates in order to better understand these animals, to understand their threats as invasive species and to develop new and better artificial infrared imaging systems for industrial, scientific, biomedical and defense applications,” Grace said. “Together with Dr. Zachariah, my students and I are literally watching the snake’s brain at work in real time in order to understand this unique ability of these snakes to see the world through its heat signatures.”

Research isn’t limited to the Brevard Zoo campus. Students often accompany zoo employees off site to make observations and perform experiments.

They have worked together in the Indian River Lagoon learning about the Florida east coast diamondback terrapin.
“This turtle was hunted nearly to extinction because it was considered a delicacy,” Grace said. “It lives right along the coastline of the eastern United States. There are seven subspecies, and the one in east central Florida is the most poorly known. From our observations, it appears to be relatively rare. The population dynamics we just don’t understand. In a very strong collaboration, we’ve developed a team to determine where they are, how many, where they nest, how they nest. There are strong education and public outreach components to this work.”

Other projects students get to work on include investigating the behavioral biology of the endangered Perdido Key beach mouse, an important part of Florida’s coastal ecosystem.

Winsten sees promise in expanding this type of collaboration, where graduate students use zoo animal populations as non-invasive study subjects.

“Perdido Key beach mice are tremendously under-studied,” he said. “It would be great for both institutions to contribute to the field through some published studies.”

“Any time a student can get hands-on training, they have a better sense of what they are learning,” Grace said. “The practical experience teaches them what life will be like in the real world. They may find job opportunities directly from these activities.”

Grace said Brevard Zoo is the perfect place for students to learn and gain practical experience and provides excellent opportunities for biologists, psychologists and educators to collect scientific data.

“Brevard Zoo is a community built, self-funded zoo, and it’s young so it has a different mode of operation than larger, older zoos,” he said. “The Brevard Zoo is truly, deeply interested in engaging the community.”

Both parties are looking forward to continuing their relationship.

“Our hope is that we will identify more and more opportunities for us to work together and take advantage of each other’s unique resources,” Winsten said. “Brevard Zoo is active in applied conservation and conservation education but relies on external scientists to inform our work. Florida Tech is home to a diverse and accomplished faculty doing research in many areas relevant to the zoo. Their presence in the community is critical to keeping local stakeholders focused on science-based decisions and provides a steady stream of well-educated conservationists and educators who come work on our staff. We, in turn, bring wildlife and conservation issues from around the world into Florida Tech’s backyard. Together we can do so much.”

—Michelle Spitzer

Science Café events are held the second Wednesday of each month at Tradewinds Restaurant at Duran Golf Club. During each free forum, guest experts explore new frontiers in science and technology, while attendees learn and mingle with accomplished scientists and others who share the same interests.

Topics have ranged from concussions in sports to ecology and conservation in the Galapagos Islands to the emergence of harmful algal blooms as health threats to marine wildlife.

The topic for June’s Science Café, held June 10, is Secrets in the Shopping Cart—the Science, Skepticism and Urban Legends of GMOs. Andrew Palmer, from Florida Tech’s department of biological sciences, will unravel the science and policy behind phrases like genetically modified, organic, artificial and natural to help make your shopping cart a little less confusing.

Science Café will then be on hiatus for the summer and will return Sept. 9 when Keith Winsten, Brevard Zoo executive director, discusses Florida conservation trends.

For more information about Science Café and future topics, visit: http://411.fit.edu/sciencecafe

—Michelle Spitzer
Julie Moore, assistant professor of aviation science, leads Florida Tech’s unmanned aerial systems minor.

Don’t Call
AS USES FOR UNMANNED AERIAL VEHICLES TAKE THESE MACHINES BEYOND THEIR MILITARY HERITAGE, A NEW ACADEMIC MINOR AT FLORIDA TECH PREPARES STUDENTS FOR THIS EMERGING, MULTI-BILLION-DOLLAR INDUSTRY.

$11.5 billion. That’s how much money will be spent on unmanned aerial systems by 2024, according to The World Unmanned Aerial Vehicle Systems Market Profile and Forecast 2014 from aerospace consultancy Teal Group.

A new minor program led by Julie Moore, a major in the U.S. Air Force and assistant professor of aviation science at Florida Tech’s College of Aeronautics, may prepare students to become part of this growing aviation and technological trend.

“There are so many applications even yet to be discovered, and the technology is only going to improve,” Moore said. “People haven’t really cracked the code on the best practices for different applications—what the challenges are, how to mitigate risk—and we’re excited about exploring these areas and leading the way in this important research and discovery.”

Operating unmanned aerial vehicles, or UAVs, which can range from lightweight quad copters to Global Hawks weighing 15,000 pounds, involves more than handling a remote control.

Flying is part of the necessary skill set, to be sure, but so, too, is building, programming and modifying the vehicles—even planning missions.

All of those areas are taught in Moore’s 18-hour Unmanned Aerial Systems program, a minor which positions Florida Tech among a handful of schools that understands the future of aviation, aeronautics and many other fields will involve unpiloted aerial vehicles—and people skilled in the ways to use them.

“It’s an exciting place for the students to be, because they are getting into an industry on the ground floor,” Moore said.

And already that ground floor is crowded: scientific research, infrastructure inspection, firefighting, agricultural monitoring, law enforcement—all current or potential uses for unmanned aerial vehicles. There are geophysicists who use them to predict the location of mineral deposits and NOAA scientists who hunt hurricanes with UAVs.

Even before the launch of the minor program in fall 2014, Florida Tech faculty have been exploring the potential uses of unmanned aerial systems. For example, College of Engineering faculty members L. DANIEL OTERO and PAUL COSENTINO received a $250,000 grant from the Florida Department of Transportation to research the use of UAVs in inspecting bridges and tall lights, called high mast luminaries.

And Moore’s students in the UAS minor are pursuing other areas as team projects. One will use an unmanned aerial system to simulate search and rescue efforts to determine how that method compares with on-foot searches. Another will investigate the efficacy of “geofencing” at airports, a technique that creates a GPS barrier meant to prevent UASs from entering particular airspace.

“There are a near unlimited number of applications for Unmanned Aerial Systems, and we look forward to exploring this new, exciting field,” Moore said.

—Adam Lowenstein

Don’t Call Them Drones

Florida Tech Today | 23
The Brothers Otero

ON SHARING AN ALMA MATER, AN AVOCATION AND AN AFFINITY FOR FAMILY

The Otero brothers—Angel, Luis Daniel (Danny) and Carlos—have a lot in common. They are family, Florida Tech alumni and Florida Tech faculty members. Danny ’02 M.S. arrived on campus in 1993 as an undergraduate, earned two master’s degrees and later joined the faculty in 2009. Today, he is associate professor of engineering systems and director of the Transportation Systems Engineering Research Lab in the College of Engineering. Carlos ’09 Ph.D. joined the faculty in 2013 as associate professor of computer engineering, and Angel ’01 M.S. came on board in 2014 as assistant professor of accounting and academic chair for online programs in the Nathan M. Bisk College of Business.

In this conversation, they reflect on returning to Florida Tech, their shared dedication to their disciplines and the value of family.
DIFFERENT PATHS ...

ANGEL: “I grew up in Puerto Rico (PR) and, while in high school, realized I had an interest in math and numbers. I used to visit companies with my dad as part of his job and met with accountants, controllers and CPAs. We would talk about the company’s strategic financial plans, cash flows, debt, financial projections, business plans ... this sparked my interest in an accounting career. I decided to attend a university in the United States to study accounting, improve my English skills and see snow.

“Upon graduating from Penn State University, I returned to PR and got my first formal job as a financial auditor. While working for about two years, I saw a need to integrate technology with my accounting background and, thus, shifted my focus back to school and moved to Melbourne to obtain a master’s degree in software engineering from Florida Tech. With both the accounting and technology backgrounds, I returned to PR and joined the global, Big 4 accounting firm of Deloitte & Touche, LLP as a financial/IT auditor. I worked for over 10 years at Deloitte and attained the position of senior manager overseeing offices in Florida and Puerto Rico.”

DANNY: “Growing up, my plan A was to become a professional baseball player. My plan B was to become an engineer and work with bridges, as I found them to be fascinating structures, especially the ones that span over bodies of water. It really never crossed my mind to become a professor and talk to audiences until later in life—midway through my second master’s degree.”

CARLOS: “I have always been fascinated by computer systems. As a kid, I was lucky enough to have Radio Shack’s Tandy computer, Atari and Nintendo’s gaming system. I was happy any time I could get my hands on an electronic system.

“I received a job offer at Harris Corp. during my senior year of college, and I began spending all of my time on industry-relevant work. That’s when I fell in love with the lifestyle of life-long learning. I became part of outstanding computer and software engineering teams working on exciting state-of-the-art systems. These projects motivated me to become better. I gradually started shifting all of my focus from industry work to academia until I earned my Ph.D. in computer engineering (after 11 years in industry). Shortly after that, I obtained my first faculty position with the University of Virginia system.”

... TO THE SAME DESTINATION.

DANNY: “Carlos and I received full baseball scholarships to finish our junior and senior years of high school at Florida Air Academy in Melbourne. Florida Tech was local in Melbourne, and I first discovered it through interviews arranged by my high school coach. I was impressed with the campus, academic programs, small class environment, plus I enjoyed living in Brevard County. One year later, after finishing high school, Carlos joined me.”

CARLOS: “I considered Brevard County my home away from home, since I spent years in high school, college and industry here. So, coming back to Brevard [as a faculty member] was a desirable option. Professionally, Florida Tech is well known, and it is surrounded with high-tech industry. This combination provides me opportunities, as a faculty member, to better complement my classroom material and research with relevant industry work. Florida Tech provides all of the components necessary for faculty to provide more meaningful learning experiences for students. With these goals in mind, the electrical and computer engineering department seemed like the perfect fit for me to continue pursuing my career goals.”

ANGEL: “I discovered Florida Tech through my brothers and earned my master’s degree here. I never envisioned myself working with them at the same university, but family and the opportunity to contribute my accounting and information systems experience with students inspired me to come back to Florida Tech.”

DANNY: “The three of us being faculty at the same university did not cross our minds until it actually happened! One of my main reasons for joining Florida Tech was the unique opportunity to be part of a growing systems engineering program in a university that was continuously improving its nationwide visibility. Joining the department of engineering systems, with such an excellent faculty and academic environment, was completely aligned with my goals.”
“We have a very strong family support system, and at the end of the day, we each try to make each other proud.”

—Carlos Otero

**HARD WORK IS INHERENT …**

**DANNY:** “Our parents instilled in us a mentality of continuous improvement and encouraged us to always push hard to get to the next level. Our father promoted the engineering profession in our household, and as it became evident that computing would play a big role in future professions, the connection between engineering and information systems was natural. Our mother emphasized creating a household environment of strong faith, always encouraging us to pray and put God first in every aspect of our lives. Without a doubt, I believe that strong faith and hard work are essential ingredients to achieving high goals in life and, more importantly, being truly happy and at peace.

“After obtaining a degree in civil engineering (and working for a while), I decided to pursue a graduate degree in computer information systems with hopes to merge both fields.

**CARLOS:** “Computers are fun to me, so having the opportunity to study computers from different angles attracted me. I spent a great deal of time writing software in industry on different embedded platforms. With time, I became interested in engineering a computer system from the ground up—that is, to have the hardware and software expertise to design and build my own computers. This is how I ended up combining computer science and engineering.”

**ANGEL:** “Integrating technology into my accounting background has given me the opportunity to pursue other specialized fields within accounting, such as auditing information technology (IT) environments for organizations, specifically their accounting and financial systems. As an IT auditor, I gain a deep understanding of IT environments, particularly how organizations respond to risks arising from IT. From a financial standpoint, knowledge about the IT environment is critical to understand how financial transactions are initiated, authorized, recorded, processed and, ultimately, reported in the financial statements. I further get the opportunity to provide recommendations to companies’ management on how to improve their existing systems in order to protect their financial information and mitigate risks to acceptable levels, which I find to be a very rewarding part of the job.”

**PROFESSIONAL OPPORTUNITIES …**

**DANNY:** “The College of Engineering, department of engineering systems and Office of Research at Florida Tech have provided essential support to help me develop the Transportation Systems Engineering Research (TSER) laboratory. State and federal grant awards have already highlighted the significant research work that takes place at the TSER Lab. Florida Tech’s support to conceptualize ideas that lead to the development of entities such as the TSER Lab is one of my favorite things about our university.”

**CARLOS:** “Florida Tech’s computer engineering program has all the necessary components to compete with the best national engineering universities. Being part of the faculty that helps it reach the next level is a once-in-a-lifetime opportunity.”

**ANGEL:** “Florida Tech offers a great working environment and opportunities for growth.”

**… AND A PERSONAL SUPPORT TEAM.**

**ANGEL:** “I am proud of Danny and Carlos’ commitment to achieving their objectives. The best advice they have given me is ‘Always work hard and try to excel at what you do.’”

**DANNY:** “I brag about my brothers’ dedication and discipline to achieve any goal they set for themselves. For example, Carlos authored a textbook that is currently being used at major universities, and Angel earned his Ph.D. while working full time in a Big 4 accounting firm, which definitely shows discipline, commitment and a serious mentality to achieve goals.

“Angel has always encouraged me to be organized, plan ahead and put God first in everything that you do. Carlos reminds me to continue pushing forward and be the best.”

**CARLOS:** “My brothers are productive members of society who support and take care of their families. They are great human beings.

“They also told me: ‘Run or you will be sorry if I catch you!’”

**BUT FAMILY COMES FIRST.**

**CARLOS:** “I left Puerto Rico at 15 years old together with my brother Danny. Even though we were physically away from the rest of our family (and on our own), we never felt alone. We have a very strong family support system, and at the end of the day, we each try to make each other proud. That keeps us going. We understand that family comes first, and we try to instill this way of life to our kids.”

**ANGEL:** “Our mother was also crucial in teaching us the spiritual side of life. Both, our dad’s push to study and become a professional plus our mom’s discipline in maintaining a strong faith in God, were crucial in defining what we are and where we are today as brothers.”

**DANNY:** “At least two of us meet almost every day for lunch, and all three of us meet two or three days per week. We talk about family-related things, like vacations or how our children are doing in school, and research topics related to our individual fields. We also get together regularly with our families, which typically includes great food, music, playing baseball, football, video games, and lots of laughing and good times.”
CERN-SATIONAL:
DORNEY RECEIVES CMS ACHIEVEMENT AWARD

BRIAN DORNEY, ’13 Ph.D., a postdoctoral fellow with the Compact Muon Solenoid (CMS) experiment at CERN, the European Organization for Nuclear Research located near Geneva, Switzerland, received a 2014 CMS Achievement Award in recognition of his contributions to the CMS experiment and its muon upgrade program. Dorney completed his Ph.D. under the supervision of MARC BAARMAND, professor of physics and space sciences.

The CMS experiment is one of the world’s largest international scientific collaborations, involving more than 3,500 scientists, engineers and students from 184 institutes in 42 countries, including Florida Tech. In 2012, the elusive Higgs boson was discovered by the CMS experiment.

Orion Ovation:
AGUAYO EARNS SPACE FLIGHT AWARENESS HONOR

LEMUEL AGUAYO, ’83, ’92 M.S., a senior project manager for the Engineering Services Contract at Kennedy Space Center, was selected by NASA as a Space Flight Awareness Honoree in recognition of his outstanding support for the Orion Exploration Flight Test-1 (EFT-1).

He received the award for going above and beyond his normal work requirements to assist NASA in procuring mission critical material needed for the Multi Payload Processing Facility (MPPF), thereby helping NASA meet major program milestones on time and on budget.
More than 1,200 degrees awarded

32 states represented

61 countries represented

2 ceremonies
TRAVIS PROCTOR ‘98 co-founded his first company, offering computer support services, as a junior in high school. He had a knack for the emerging technology, and he liked helping people solve problems.

He was drawn to Florida Tech from rural Colorado because he wanted an academic program that combined his dual interests: computer science and entrepreneurship.

Unlike peer institutions at the time, Florida Tech allowed students to take business courses in tandem with their primary program of study, the equivalency of an academic minor.

“The ability to take business courses while taking computer science courses was one of the key factors attracting me to the university,” says Proctor.

He quickly applied his growing skillset, founding Artemis IT during his sophomore year. Named for the Greek goddess of the hunt (drawing inspiration from Gordon Patterson’s mythology course), it seemed like a fitting name for a fledgling company—fierce and fertile, first in a phonebook and ending in MIS, managing information systems, the essence of the company.

At the same time, Proctor balanced responsibilities as student body president, a job in IT support for the auxiliary services office and a full course load, ultimately graduating top of his class.

This practical experience, professional network and solid academic core helped lay the groundwork for the future success of his company.

“The classroom education was certainly the foundation, but because I had the opportunity to engage in so many different things while at school—interacting with folks, managing teams, working toward end objectives—it better prepared me to drive the business forward,” says Proctor.

A FATEFUL PARTNERSHIP

TERESA HO ’95, ’98 MBA, says fate brought her to Florida Tech.

After a year abroad at the University of Nottingham, the Panama native was fed up with the gloomy British climate and longed for a location more like home. She set her sights on Florida and applied to many universities.

Then Hurricane Andrew struck. Postal service was interrupted and no acceptance letters were able to reach her in Panama. Enrollment deadlines were approaching, and Ho was panicked.

“I knew about Florida Tech because my cousin was already enrolled in the computer science program,” she says.

Ho did eventually receive her Florida Tech acceptance letter and studied business administration. She was also involved in the International Student Organization (ISO).

“I was very active with ISO because I enjoy meeting people from all over the world and helping new international students acclimate and make connections,” she says. “In England, I was very homesick so I knew how important it was for international students to get involved and build a support system.”

She met Proctor through mutual friends, and over time, the two became colleagues and eventually a couple.

Ho was the first full-time employee of Artemis, which at that time was housed in a modest office space in The 1900 Building in downtown Melbourne. She served as office manager, handling every task from accounting to reception.

She adapted easily to the high-tech industry, drawing from her experience as a graduate student assistant (GSA) in the School of Business where she managed the school’s first dedicated computer lab.
“For me, moving to the IT industry was very easy because I could understand the lingo; I was familiar with the environment. It was a natural progression,” she says.

And a perfect pairing. As Proctor focused on building the technical side of the business, Ho managed the financial aspects. Yet, it would be 13 more years before their business partnership became a romantic one.

ACCLAIMED ACCOMPLISHMENT

Today, Proctor, as chief executive officer, and Ho, as chief financial officer, have built Artemis into a thriving IT management and consulting company, employing nearly 55 people and serving clients throughout Central Florida.

They wed in the Florida Tech Botanical Garden in 2007 and welcomed their son John in 2011.

“Florida Tech holds a special place in our hearts,” says Proctor. “From a business perspective, it helped us prepare ourselves and build a successful company, and on the personal side, it’s where Teresa and I met.”

“We were proud of our Florida Tech degrees when we graduated, but it has been amazing to see how the university has progressed. We feel like our degrees are becoming more prestigious as time goes on because of the growth and increased recognition of the university. We are proud to say we’re Panthers.”

SO WHAT’S NEXT?

Much like the university where it started, Artemis continues to flourish. The company has successfully navigated a merger, enjoyed substantial growth and anticipates expanding into Central Florida more aggressively in the coming years, while Proctor and Ho strive to maintain work-life balance.

“I so look forward to spending every minute I can with our son,” says Ho. “Time is flying, and he won’t be young for long!”

The couple also remains committed to the community, with Proctor serving on the boards of several charitable organizations including the Florida Tech board of trustees.

From student body president to university trustee, his path has come full circle, and perhaps his next appointment will be Panther parent.

—Christena Callahan
**ALUMNOTES**

**1970s**

**BERNIE FUCHS** ’70, president of the FIT Greater Boston Alumni Chapter, right, volunteered with NORM SMITH, assistant director of admissions, at the National College Fair held in Boston in April.

**DON JOFFE** ’77 M.S. works for Gwinnett County, Georgia, Department of Water Resources as director of the Division of Engineering and Construction. Environmental Engineering.

**1980s**

Alumni board member **DON HOOPER** ’84 and his wife **LISA** ’86 M.S. met a fellow Panther abroad. The Hoopers spent two weeks exploring northern India in late October. After catching a fabulous sunrise at the Taj Mahal and exploring local forts and temples, they went to the Agra train station and boarded a night train to Varanasi. Chatting with fellow passengers over coffee, the Hoopers met Priyanka Kanhekar, a recent college graduate who was preparing to leave for the U.S. to pursue a master’s degree at FIT. The student and her family asked lots of questions about the university and living in Melbourne.

**JOHN TILIAKOS** ’85, vice president of operations and customer service at Tampa International Airport, has been named one of the 25 People to Watch in 2015 by the Tampa Bay Business Journal.

**MIKE MAGEE** ’89 MBA joined LiteAire Systems as vice president of sales and business development, Life Sciences and Health Care Division in March. The company manufactures air filtration systems for the health care and life sciences industry.

**1990s**

**JOHN AITKEN** ’90 was promoted to assistant director of aviation for Mineta San José International Airport (SJC) in March. He has served as acting assistant director of aviation since 2013 and deputy director of aviation operations since 2002. He has been with SJC since 1993.

**JOHN TILIACOS** ’85, vice president of operations and customer service at Tampa International Airport, has been named one of the 25 People to Watch in 2015 by the Tampa Bay Business Journal.

**MARTIN GERHARD** ’90 is a pilot for United Airlines based out of Chicago. He has been flying the Boeing 777 internationally for the last eight years. “Time to return to the left seat,” he writes. “Airbus A320 training in March 2015.”

**ANN SPELLMAN** ’91 M.S. is a marine biologist with the Florida Fish and Wildlife Conservation Commission. In August 2014, she completed her doctorate as a member of UCF’s inaugural Conservation Biology Graduate Program, studying manatee physiology as it relates to cold exposure and use of warm water sites in Brevard County. This winter when 20 manatees became trapped in storm water drainage pipes in Satellite Beach, Spellman coordinated their extraction and return to a more suitable habitat.

**CAREFREE**, a quilt created by **ELLEN LINDNER** ’93 MBA, won Best Pictorial at the World Quilt Show–Florida in West Palm Beach. View more of her work at www.EllenLindner.com.

**KUANG-CHI KAO** ’86 MBA was appointed Minister of National Defense for Taiwan in January 2015.

**LLOYD TILLMANN** ’93 recently joined Tampa International Airport (Hillsborough County Aviation Authority) as the director of operations.

**THOMAS CANTABENE** ’94 is the chief pilot for Nissan Corporate Aviation in Smyrna, Tennessee. He lives with his wife and two children in Nashville.

**ON THE ROAD**

**New York**

Dr. Ira Goodman ’84, Jane Goodman

Joi Branch ’11, Dr. Nancy Rogers Bontempo ’79, Weyni Nazon ’01

Bino Campanini, Robert Kovner ’03, Justin Grigg ’07, Robert Azzollini ’03
NAHID MOHAJERI ‘94 M.S., ‘99 Ph.D., was been recognized by the Florida High Tech Corridor Council as one of its 2015 “Faces of Technology.” Mohajeri is the founder and CEO for HySense Technologies, an organization that invented and manufactures a color-changing pigment material, which is applied to tape and wrapped around piping to detect hydrogen leaks. The idea has won hundreds of thousands of dollars in innovative business venture competitions.

ABDELMOU LA ELHARTI ‘95 M.S. welcomed daughter Jenna in December 2013.


ROBERT SALLEY ‘95 MBA was promoted to assistant vice president, organizational effectiveness, corporate division at Pacific Life Insurance Company. He holds a Doctorate of Education in organizational effectiveness from Pepperdine University and is a resident of Chino, California.

2000s

CHRISTOPHE MAIER ’00 welcomed son Anthony in April 2014, who joins big brother Mathis, 7. The family lives in Switzerland.

DEANNE (CAMPBELL) POWERS ’02 and Francis Powers ’07 welcomed their son Maximus on April 15, 2012. He turns 3 this year.

STEVE MAY ’03 M.S. is the director of Jack Daniel’s Lynchburg Homeplace and marketing operations for Jack Daniel’s distillery in Lynchburg, Tennessee.

Safe Schools in Pakistan

ZEESHAN-UL-HASSAN USMANI ’06 M.S., ’09 Ph.D., co-founder and chief data scientist at Predictify.Me, a North Carolina-based data sciences and predictive analytics company, developed the technology that will be used in a new innovative partnership, which will deliver state-of-the-art technology to promote Safe Schools in Pakistan.

With more than 10,000 attacks on schools over the past five years, the Pakistan project is part of a larger Safe Schools effort championed by UN Special Education Envoy Gordon Brown, pictured with Usmani below, covering programs in northern Nigeria as well as in Lebanon for Syrian refugees.

Usmani is a Pakistani Fulbright Scholar and Eisenhower Fellow and a scientist with expertise in simulation and modeling of blast waves in open and confined spaces.

Submit your AlumNotes to alumni@fit.edu

ON THE ROAD

Orlando

Krystal Clem ’07, Carolyn Malphurs ’07

Brian Stahl ’87, Andy Kirbach ’90, Dave Murphy ’01, Chad Shoulitz ’96, Dr. Rhodie Humbert ’82, Eddie Enders ’93, Bino Campanini, Rebecca Lambert ’91

Joni Anthony, Michael Anthony ’14

Continued on page 34
CHERYL (DINGMAN) STIMERS ’06 and JAMES STIMERS ’06 welcomed their first child, Sara Marie, on Dec. 12, 2014. She weighed 7 lbs., 1 oz. and was 19 inches long. James works for EMC in Seattle, and Cheryl is a stay-at-home mom and volunteers at the Seattle Humane Society.

JOHN WHITEHEAD ’06 and his wife Teresa welcomed son Spencer in February 2014. John is the production estimator for Great Lakes Dredge & Dock Company in Chicago.

TODD GUIDRY ’09, ’10 M.S., and Anne (Stout) Guidry ’12 will soon be expanding their Panther family. They are expecting their first child in July.

MORGAN (TWEEDIE) WOODARD ’07 and JAMES WOODARD ’09 welcomed their first child, Cameron James Woodard, on Dec. 2, 2014. Morgan is a marine biology teacher at Viera High School, and James is an engineer for BRPH Architects.

MARATHON MAN

Volunteer assistant cross country and track & field coach CHRIS CACCIAPAGLIA ’12 finished 295th out of 30,251 entries at the Boston Marathon on April 21. A biological sciences doctoral student from Vashon, Washington, he concluded just his third marathon in a time of two hours, 40 minutes and 33 seconds to re-qualify for the event in which he hopes to race again one day.

GAËL LE BRIS ’10 M.S. is the airside development manager at Paris-CDG Airport. He was a guest speaker at the TRB Annual Meeting 2015 in Washington, D.C., organized by the Transportation Research Board, one of the six major divisions of the National Research Council. The TRB Annual Meeting is attended by more than 12,000 participants. During the session “International Aviation Issues and Perspectives,” Le Bris presented an innovative study about the upgrade of the RESA (Runway End Safety Area). He was also a speaker at different technical committees.

KIM FATICA ’11 MBA was named vice president of operations for Paramount Asset Management in Manassas, Virginia. Paramount provides mortgage field services to major banks and GSEs that include Fannie Mae, Freddie Mac and HUD. He was previously chief marketing officer for Keystone Property Services. He is in his 42nd year as a member of the Boy Scouts.

ON THE ROAD

Dad Vail

Michael McAndrews ’85, Alan Taggart ’87, Matt Dunleavy ’85
Laurel Bryant, Crystal Bourne, Capt. Dennis Bourne ’81, Brandon Bourne ’13
Janell Bartell, James Woodard ’09, Morgan Woodard ’07, Casey Dalal ’11, Alec Bertossa ’14, Steven Plunket ’05
of America, currently as an assistant scoutmaster and a member of the Gulf Ridge Council’s Marketing Committee. He currently resides in Tampa with wife, Judy, and children Olivia and Noah.

Florida Tech volunteer assistant cross country and track & field coach WADE DAUBERMAN ’12 finished second in his age group and came in sixth overall at the HITS Ocala Triathlon. He swam 2.4 miles, then biked 112 miles and finally ran 26.2 miles in a time of 12:11:50.

LAYLA DOWDY ’13 MBA received FSU’s 2014 30 Under 30 Award and Reubin O’D. Askew Young Alumni Award. She is a lead communications manager at NASA headquarters in Washington, D.C., where she develops and implements communication plans and policies for the Space Technology Mission Directorate to promote NASA’s technology portfolio and engage key stakeholders.

TRISH ROSS ’13 Psy.D. and her husband welcomed son Blake in 2014. She is a licensed staff psychologist at The Scott Center for Autism Treatment.

BEN DEBROCKE ’13 MBA is chief technology officer for Century 21 Beggins Enterprises in Apollo Beach, Florida. The company earned the 2014 Century 21 Company Technology Award, which is presented to one of Century 21’s 6,900 offices worldwide that is intensely focused on technology in support of its growth and success. DeBrocke and Beggins Enterprises partners Jeff and Craig Beggins accepted the award at the 2015 Century 21 Global Conference in Washington, D.C., in February.

ELVIN A. WOODRUFF III ’14 M.S. works in information management/cyber security for the state of Tennessee, Homeland Security. He has two children.

ON THE ROAD

Brazil Scientific Mobility Certificate Ceremony

Students in the Brazil Scientific Mobility Program (BSMP) are welcomed into the alumni ranks at a ceremony in the Hartley Room.

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 hrosskamp@fit.edu

ARJUN SETH’s daughter Tanya loves her Florida Tech onesie!
In Memoriam

JOSEPH C. RHODES JR. ’75, of Ellenton, Florida, passed away March 11, 2015. He had an accomplished career working for IBM, Compaq/Hewlett-Packard, Jabil, and had joined the staff at Chipola College in 2014 as an instructor. He is survived by his wife Pamela, his son and his daughter.

CYNTHIA ANN BABICH ’85 Psy.D., of Satellite Beach, passed away on Feb. 16, 2015. She is survived by her husband, Michael Babich, former head of the department of chemistry, her daughters and their families, and many other family members. She touched the lives of countless people through her personal life as a loving wife, mother, grand-mother and friend as well as through her work, first as a nurse and then a psychologist, and as a volunteer at many organizations.

DAVID O’BYRNE ’99, of Indialantic, passed away March 2, 2015.

Staff Sgt. MATTHEW R. AMMERMAN, of Noblesville, Indiana, died on Dec. 3, 2014, in Zabul Province, Afghanistan. He was a current student of Florida Tech University Online. He was assigned to the 3rd Battalion, 7th Special Forces Group, Eglin Air Force Base, Florida.

ED EVERETTE, who helped establish the university as a world leader in aeronautics over a 20-year tenure as flight instructor, professor and dean, passed away on Dec. 28, 2014. Over his two decades at the university, from 1975 to 1995, Everette held various positions, culminating with his appointment as dean of what was then the School of Aeronautics. He also served as president of FIT Aviation. He was named professor emeritus after leaving Florida Tech.

ROSEMARY KEAN passed away on Feb. 14, 2015. During her 25-year career at the Evans Library, she advanced the library’s patron-focused service model, supervised over 700 student employees and helped shape a positive culture that carries on today. She retired in 2005.

In Memoriam

Fidgi Haig

FITZGERALD “FIDGI” HAIG ’92, Florida Tech head women’s soccer coach, passed away from natural causes on April 16, 2015, at 47 years old.

Haig coached the Panthers for 10 seasons, guiding them to the program’s first NCAA Division II South Region Championship and a Final Four appearance in 2010. He also played soccer for four years at FIT and helped the men’s team win the program’s first NCAA Division II National Championship in 1988.

“The magnitude of Coach Fidgi Haig’s positive impact on this university and this community cannot be calculated,” said President Anthony J. Catanese. “An outstanding coach, mentor and friend to so many, he will be deeply missed.”

A member of the Florida Tech Sports Hall of Fame and Space Coast Sports Hall of Fame, Haig also had a tremendous impact in club soccer. He coached in Indialantic, with Florida Select, the Olympic Development boys team, Space Coast United Soccer Club and the Orlando City Youth Soccer Club.

He is survived by his wife Sanna, and his children, Landen, Karin and Aiden.

In Memoriam

Ruth E. Funk

RUTH E. FUNK, trustee and long-time university benefactor, passed away March 5, 2015.

An accomplished artist, designer and teacher originally from Texas, Funk had a “transformative effect” on campus, said President Catanese, through her creativity, energy and dedication to textiles education.

She first donated hundreds of items of kaleidoscopically colored ethnic textiles and wearable art from around the world, and jewelry and cultural artifacts of artistic and historic value. She also enriched Evans Library’s holdings of art and design material by almost 500 volumes. She funded the Uncommon Threads symposia, the annual textiles program, including the Annual Ruth Funk Lecturer in Textiles.

Her $1.25 million gift financed the building of the Ruth Funk Center for Textile Arts on campus—the only such center of its type in Florida.
“My role involves creating the physical expression of our brand in retail, which includes creating stores, mall kiosks, beauty counters in department stores internationally and the physical display materials and experience here in the United States.

We look at the shopping experience as a whole and make sure our products are presented in a way that is consistent with our brand and with the needs of our customers.

Right now, we’re redoing the look and feel of our Burt’s Bees stores internationally. I’m working with an agency out of Sydney, Australia, to be able to help define the updated view of a Burt’s Bees retail environment. The majority of our international stores are in Asia and Latin America, but they’ll be quickly expanding into Western Europe and other parts of the globe.

Prior to joining Burt’s Bees, I had nearly 20 years of experience in the consumer packaged goods industry, including roles at Nabisco, Purina and Gillette.

When I joined Burt’s Bees six years ago, the brand was looking very fragmented across the globe. My focus for the first few years was to create the retail standard of identity for the Burt’s Bees brand—essentially, thinking about the complete physical embodiment of the brand, the experience of all five senses, and distilling that to the brand essence.

The line drawing illustration of Burt and the Burt’s Bees yellow has been around for a really long time, but there were a lot of other elements that weren’t fully defined. My role has involved refining the look and the feel and bringing the elements into an appropriate balance at retail. We’ve had some great success in altering the retail environments, both globally and domestically, in a very short amount of time and it’s been paying dividends back to the business.

And the business, in turn, gives back to society. I’m proud to be a part of a company that is authentic, meaningful and gives back, which is something so many of us covet throughout our careers.

The Burt’s Bees Greater Good Foundation supports many charitable initiatives that focus on the juxtaposition of human and honeybee health, supporting research to understand the factors contributing to honeybee decline.

Recently, as part of our Culture Day, an annual company-wide gathering where employees connect with each other and give back to the community, we built 76 beehives for local nonprofits in North Carolina. The event reminds us of the values and the truth of this company and what it stands for. It’s not just about making amazing personal care products; it’s working to change the world one day at a time for the better.
As I travel around the country meeting our alumni at the various receptions we host with President Catanese, I have been emphasizing the importance of alumni participation. Participation with your alma mater can come in many forms—from as simple as signing an alumni endorsement grant to as grand as organizing an alumni chapter and everything in between. U.S. News & World Report judges alumni satisfaction by the percentage of alumni who donate to their university in a year. This figure is part of their ranking criteria. No matter how you look at it, a vibrant and healthy university has alumni who participate in some manner with their alma mater.

The feedback I hear on the road is always positive. You are happy with the direction Florida Tech is heading, and many of you are proud of the accolades the university has received in recent years. But we want to hear from more of you. So over the summer, we will be sending out a survey to learn more about your thoughts and opinions. Your feedback is important to us as it enables us to be more responsive to the needs of our alumni. I urge you all to take a few minutes to participate in this survey. As I always say ... your participation matters!

APRIL FOOLS!

I received a lot of feedback about our Facebook announcement that U2 would be playing at FIT Homecoming Fest. The level of excitement and the number of people who were emailing and calling Alumni House was incredible. Of course, when they realized the date—April 1—there was a lot of disappointment tinged with good humor. We had a lot of fun with this, and our alumni who engaged with us on our Facebook page seemed to get a kick out of it as well. If you have not yet liked the alumni page, join us and get connected with what the Alumni Association is doing.

The fact that we were able to pull off this April Fools prank says a lot about how far FIT Homecoming Fest has come in three short years. Although U2 won’t be headlining this homecoming, we will have a great band once again that we will announce on our Facebook page in the coming weeks.
Take a photo of YOU SHOWING YOUR PANTHER PRIDE in a unique destination or in a fun and creative way.

Then, email us at pete@fit.edu or upload to Twitter or Instagram using #PetePhoto

Weekly Prizes!
For the best photos received over the summer.
Summers at Sea

As summer field projects commence, we reflect on this photo from 1979. Do you recognize it?

Are you pictured here? Have a fond memory of marine field work? Adventures aboard Miss Fit, Delphinus or another research vessel?

Tell us about it at ftechtoday@fit.edu