Dear Colleagues and Friends,

In 2015, when Florida International University launched its strategic blueprint, FIUBeyondPossible2020, the College of Engineering & Computing took on the challenge to be a driving force for innovation as we build towards the future.

For our College, the period between 2015 and 2017 has been defined by a growing wheel of impact in all strategic areas of emphasis. We have many reasons to celebrate: the success of our students, new discoveries, innovative solutions, enhanced engagement with our local and international communities, and the generous philanthropy of our alumni.

This report is a testament to the commitment of our students, advisors, staff, faculty and alumni to create a diverse, inclusive community that offers opportunity and joy of living to all. I congratulate all who have contributed to the success of our college and look forward to continued excellence and impact.

Ranu Jung, Ph.D.,
Interim Dean

Wallace H. Coulter Eminent Scholar Chair
in Biomedical Engineering

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PROTECTING THE NATION’S POWER GRID

Team Hackers

Dr. Osama Mohamed, a professor in the Electrical and Computer Engineering Department, has led several successful research efforts, including the development of an algorithm that can predict power grid failures. The team has received $900,000 in research awards from the Department of Energy, which they believe could lead to significant improvements in the grid's reliability.

HIGHLIGHTS INCLUDE:

- NSF STI-STEP grant awarded to Florida Consortium of Metropolitan Universities to support research in nanotechnology.
- The team led by Professor Mohamed successfully predicted a major power outage in the Northeastern United States, demonstrating the potential of their algorithm.
- The team's research has been featured in national media, including a recent article in Science magazine.
- Future plans include expanding the algorithm to other critical infrastructure systems.
Florida Power & Light Company (FPL)
FPL has long been a partner with FIU and FIU students. FPL and FIU have partnered on various initiatives. The recently unveiled 1.4 megawatt solar array allows engineering faculty and students from the Energy, Power & Sustainability (EPS) program at FIU to use the installation to conduct important research that will help FPL advance solar energy in the state.

Through a five-year research grant, faculty and students are analyzing data from the on-site solar panels to understand the impact of intermittent solar power on the electric grid. South Florida’s tropical climate. The researchers also look at historic weather patterns and develop predictive models to forecast the reliability of solar power generation. In addition to hundreds of FPL employees who are FIU alumni, the energy company runs an on-campus customer care training center where students answer calls from customers.

FPL also donated an electric vehicle from its clean fleet to FIU’s College of Engineering to further research and test wireless charging technology. Besides conducting research on wireless charging, the EPS students also work at the FPL laboratories every week to conduct high-end experiments and research on batteries and access points.

Fiat Chrysler Automobiles (FCA US)
FCA US visited CEC and hosted a design challenge with the end goal of hiring FIU students. The event was part of the Women of CEC, an initiative launched by the college to recruit, retain and graduate women engineers. The day began with a panel discussion, Footsteps: From Campus to Corporate, which featured several FCA US women executives. The event was moderated by FIU alumna Maria Quintero, ‘13, who now works for the company as a foundation brakes engineer. After the panel, students crowded the Panther Pit for the Design Challenge. Participants had to build a gliding car, one with wheels, but that could also fly once rolled off a table. Students were given a budget and had to decide what materials to purchase and then use those materials to create the car. They were judged on design innovation, weight of the car, cost and the distance the vehicle traveled. While on campus, FCA US also presented the FIU’s Society of Automotive Engineers (SAE) Club with an $11,000 check to help with costs to take the Formula One SAE car to the SAE International Competition held in Michigan in May.

Ultimate Software
Ultimate Software (Nasdaq: ULTI) is a leading provider of human capital management (HCM) solutions in the cloud, and FIU announced a 10-year extension to their current technology education partnership. The new commitment has helped establish an endowment for CEC’s School of Computing and Information Sciences (SCIS), fund scholarships for students at the university, and support the development of science, technology, engineering and mathematics (STEM) education throughout high schools in the community. Ultimate Software first partnered with FIU in 2007 to create the TechSTARS internship program. Through TechSTARS, Ultimate Software works in tandem with the SCIS to identify promising students and to provide them with real-life experiences and an early glimpse of tech careers. Since the program’s inception, Ultimate Software has employed more than 100 TechSTARS from FIU as full-time engineers. Sitharama Iyengar, SVP Director, has been instrumental in building various industry partnerships like this one with Ultimate Software.

As CEC continues to foster relationships with local companies, the goal is to emulate successful strategies on a national scale.
A Preeminent Program at FIU is a collaborative endeavor that demonstrates extraordinary success in providing unique learning opportunities, pioneering research and engagement while expanding the university’s financial base. Additionally, these programs advance the BeyondPossible2020 strategic plan, and enhance FIU’s reputation at the national and international level.

Pioneering device may restore sensation to amputees

The FDA has granted an investigational device exemption for the first-in-human trial for a neural-enabled prosthetic hand system (NEPH) developed by Ranu Jung, and her Adaptive Neural Systems Laboratory team. Jung’s technology stimulates nerves in the arm to provide sensation as the person is using the prosthetic hand. The prosthetic system has the first fully implantable, wirelessly controlled Class-III device with electrodes that can be surgically implanted within the nerves of the residual arm. Similar to a pacemaker, the system works by delivering small electrical pulses to specific nerves in the arm. Wires as thin as a hair strand are placed within nerve bundles in the arm and connected to an electrical stimulator. Sensors embedded in the prosthetic hand send signals wirelessly to the implanted stimulator, which then initiates a sensation by delivering weak electrical pulses via the implanted electrodes. As a result, the person should be able to sense their hand opening position and grip items when the prosthetic hand encounters an object.

FIU’s 12 fan Wall of Wind (WOW) was designated in 2015 as one of seven national multi-user large facilities in the country under the Natural Hazards Engineering Research Infrastructure (NHERI) program, and one of only two nationwide dedicated to studying extreme wind events. The WOW is the largest and most powerful university research facility of its kind, capable of simulating Category 4 hurricane winds. National Science Foundation-funded researchers use the “experimental facility” to work on wind engineering projects, and are part of a network of scientists who study various aspects of natural hazards.

Accelerated Bridge Construction

University Transportation Center (ABC-UTC)

The mission of the ABC-UTC is to reduce the societal costs of bridge construction by reducing the duration of work zones, focusing special attention on preservation, service life, construction costs, education of the profession and development of a next-generation workforce fully equipped with ABC knowledge. ABC-UTC focuses on three key areas: research, education and workforce development, and technology transfer. In December 2016, the U.S. Department of Transportation awarded the ABC-UTC its second round of funding, allowing it to expand its scope to provide solutions to the transportation industry’s needs at the national level, with the inclusion of two additional partner universities: The University of Washington (UW) and Oklahoma University (OU) joining existing partners University of Nevada, Reno (UNR) and Iowa State University (ISU).
Giving

Private gifts in 2016-2017 exceeded $11.3 M in support of the college’s mission, helping to fund programs such as:

Student groups
Student organizations such as Society of Women Engineers (SWE) and Society of Automotive Engineers (SAE), as well as outreach programs such as Engineers on Wheels (EOW), for its engineering students.

Engineering Expo
Annual event that motivates more than 1,500 K-12 students to the college and exposes them to hands-on activities to spark an interest in engineering careers.

First-generation scholarship endowment
Scholarships awarded to students who are the first in their immediate family to earn a baccalaureate degree.

Academics

Master of Science in Logistics Engineering

The College of Engineering & Computing offers the only graduate degree in logistics engineering in South Florida. The new master’s program, which admitted its first students in the spring of 2017, prepares individuals for careers as logistics systems engineers, supply network analysts, logistics planners and operation managers.

The program provides training and research support for an active local logistics industry. As a gateway to Latin America, the Caribbean and Europe, South Florida supports two international airports, two cargo ports, major cruise lines and numerous freight transport companies. The program will graduate professionals ready to enter existing jobs and fill the thousands of Florida’s new logistics positions as a global hub for trade, logistics and export-oriented manufacturing activities. With more than half a million Floridians already employed in logistics and distribution, the need to expand the workforce remains great.

The college also signed a renewal of its civil engineering dual-degree agreement with the Universidad Iberoamericana in Santo Domingo, Dominican Republic. The program offers undergraduate students in the DR the opportunity to complete two degree programs concurrently. Students divide their studies between Miami and Santo Domingo to meet graduation requirements that will earn them diplomas from both institutions. Participants have the opportunity to learn from a diverse faculty and gain a broader understanding through exposure to a variety of perspectives and experiences.

International Student Degrees

The College of Engineering & Computing recently entered into two international academic agreements. FIU leaders, including FIU Provost and Executive Vice President Kenneth C. Turley, Vice Provost for Faculty and Global Affairs Meredith A. Newman and CEC Interim Dean Ranu Jung, traveled to China to sign two academic agreements with the Shanghai University of Engineering Science. One was a graduate pipeline agreement, and the other was an undergraduate dual-degree agreement in electrical engineering. Another graduate pipeline agreement was signed in China with Hebei University. The college already has an undergraduate dual-degree agreement with them. CEC will also be offering the master of science in engineering management program at the University of Commonwealth (UCC) in Kingston, Jamaica starting in Spring 2018. The 13-month program will be taught at the UCC facilities.

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FIU College of Engineering & Computing

2015 - 2017 Performance Review
Chad Moss Executive vice president, Moss & Associates

Chad Moss made a $10 million gift to FIU’s College of Engineering & Computing – the largest donation by an alumnus to date.

“Chad Moss has shown incredible vision and entrepreneurship in Miami and across the country,” said FIU President Mark B. Rosenberg. “This generous gift is a history-making donation that will help us create a new generation of construction professionals who will have an impact on our community and beyond.”

In recognition of his gift, FIU’s College of Engineering & Computing will name the school the Moss School of Construction, Infrastructure and Sustainability. With more than half of the world’s population living in urban environments, the school’s naming coincides with the academic reorganization of the school, reflecting academic and industry endeavors; technology resources; and continuing professional education and industry programs, exhibitions, lectures, charrettes and master classes, as well as creative and research activities.

The Moss School of Construction, Infrastructure and Sustainability Endowment will support the creation of three endowments, among them, the Moss Foundation Scholarship Endowment, which will provide scholarships to FIU students, particularly those who are first-generation students, veterans, and/or disadvantaged youth.

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The Moss School of Construction, Infrastructure and Sustainability Endowment will support four key areas: Faculty and post-graduate research initiative; student academic and industry endowments, technology resources; and continuing professional education and industry programs, exhibitions, lectures, charrettes and master classes, as well as creative and research activities.

Women of Engineering

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Women of Engineering

The Women of CEC is an initiative launched by the college to increase the number of women pursuing STEM careers, particularly in engineering. Although women fill nearly half of all jobs in the U.S. economy, they hold less than 25 percent of STEM jobs.

The Women of CEC initiative consists of:

Kick-off/Panel: Held in the fall and spring to demonstrate to new students that the college is fully invested in their success.

FCA Women in Engineering Forum: Held in the fall, this corporate partner to meet and recruit female students.

 JP Morgan Chase Women in Engineering Forum: A spring event that includes a panel discussion with four female executives and students.

Breaking Barriers: A monthly online feature highlighting women engineers, computer scientists and construction professionals paving the way for women in the field.

Women in Advising

The Engineering Advising Center is committed to helping future engineers, including female students, succeed. The staff is made up of 15 advisors, 12 of whom are female. Meet one of them.

Carmen Schenck

As a child, Carmen was always fixing things that didn’t work, and even taking them apart so she could put them back together again. She also excelled at math and science, so a career in mechanical engineering made sense, but it would take years to reach her goal. Growing up in Caracas, Venezuela, she worked full-time through high school to help out her single mom with the family’s bills. Any money left over, she’d save for college. When she graduated from high school, she went to England to learn English while attending school as a study-abroad student. She then came to the U.S. and spent some time on the West Coast, where she attended a community college and UC Berkeley for a year before returning to Manhattan to be closer to her mom, who was still in Venezuela.

Carmen graduated from FIU with both her bachelor’s and master’s degrees in mechanical engineering. Underground, it took her many years, but at age 29, this first-generation student finally achieved her dream. Shortly after graduation, she was offered a job at CEC in Advising, with the opportunity to teach – a role she’d had for close to 25 years. As a senior instructor and advisor, Carmen teaches Intro to Engineering, and advises students on their class schedules and career path. She also encourages students to try something new and the ones who want to give up, emphasizing the importance of education. Carmen has been married for 27 years. She and her husband have one son who’s following in her footsteps. He’s graduated summa cum laude and is now pursuing mechanical/aerospace engineering at University of Florida, and he has already completed an internship at NASA.

Breaking Barriers

Libiona Rincon Conde is a biomedical engineer and computer scientist working on sensory perception research. She is also a biodegradable engineering, neuroscience and technology expert, who mentors several students at FIU and graduate students. She is also the research coordinator at the FIU for the multi-center, multi-site, multi-year, $7 million National Human trial for a novel neural implant device for innovative sensory rehabilitation and interaction. She works with all the regulatory aspects of the project including: compliance, institutional review boards and federal guidelines. She is the current member of the College of Engineering & Computing Women of the CEC initiative. She is an assistant professor at the University of Florida and completed her Ph.D. and M.S. in biomedical engineering at FIU. Conde conducts multidisciplinary research in the areas of human-machine interfaces and disabilities. Her current research focuses on sensory perception.

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Adalio T. Sanchez found tremendous success in business, and now he empowers students to pursue engineering careers by giving back to FIU’s College of Engineering & Computing.

For more than three decades, Sanchez held a variety of senior management positions with IBM. While there, a mentor said to him, “you’re going to be somebody here; what’s your cause?” The advice resonated with Sanchez and he realized that when you become successful in life, you can’t forget where you’re from. “I took that tap on the shoulder as my call to action to help my community.”

During this time – in the 90s – there was a STEM crisis in the nation, and FIU was graduating the greatest number of Hispanic engineers in the country, recalled Sanchez. As a Hispanic and first-generation student, he thought, “how do I help FIU do what it’s doing well and spread those success stories so we can help the Hispanic community become more engaged in the technical world?” As someone who obtained his engineering degree in South Florida, and an MBA (’87) from FIU, it was obvious to him he had to get involved.

As a result of Sanchez’s generosity, several significant major gifts are now in place to support first-generation Hispanic engineering and computing students pursue their career dreams. Their success is personal to him – Sanchez has worked since he was 13 years old, and received his engineering degree while simultaneously working full-time. He earned his degree in less than four years, and graduated with no loans, thanks to the money he earned and scholarships that funded his education. “I want to make it easier for others not to give up and to continue pursuing their career aspirations in technical fields.”

Today, Sanchez serves as president of S Group Advisory, LLC, a consulting business for technology companies that advise on strategy, technology and operational excellence. Prior to that, he ran a $7 billion revenue business, which was sold to Lenovo Ltd., where he served as senior vice president of enterprise systems.

For Sanchez, it is his mission to help the community and nation bridge the digital divide, and support Hispanics so that they continue to contribute to the technical fabric of this nation.

“Anything I can do to help students pursue STEM fields is my passion.”

Maria Quintero
Brakes engineer, FCA US LLC

“Anything I can do to help students pursue STEM fields is my passion.”

Maria Quintero (‘15) studied electronics engineering in her native Caracas, Venezuela. When she arrived at FIU in 2010 to study electrical engineering, her love for all things automotive led her to start a Formula One SAE chapter at the university. At the time, she didn’t know she would end up working for a major automobile manufacturer, FCA US.

Upon graduation, Quintero participated in the company’s Chrysler Institute of Engineering (CIE) program, a two-and-a-half year rotational program that allows aspiring auto engineers to work in different areas of the company. When she completed the program – designed to produce a well-rounded engineer – she was hired as a brakes engineer for the current and future generation RAM 1500.

In this role, she is in charge of design, development and release for the vehicle’s foundation brakes. Her job involves everything from working with suppliers to design the parts and coordinating with the manufacturing organization to install them correctly, to then going through production, quality control and testing performance.

As an FIU alumna, Quintero is a leader on the recruiting team at FCA US. The company plans year-long activities at FIU to recruit both interns and full-time hires. “We have had great success, not only recruiting on the engineering side, but also on the business side and in information technology,” she said in an interview with FIU in 2015. According to FCA US, due to the fact that FIU graduates the largest number of Hispanic engineers in the country, the university is a great source of diverse talent for their global company.

Quintero also played a major role in helping the college get resources for its Engineers on Wheels (EOW) program. The college is pleased to acknowledge The FCA Foundation’s (formerly The Chrysler Foundation) generous donation of the EOW van to take the STEM and engineering experience to local middle and high school venues, as well as support for EOW programming. FCA US sponsors the Society of Automotive Engineers (SAE) chapter at FIU, and provides feedback to the students working on their FSAE race car on a monthly basis prior to the international competition in May at the Michigan International Speedway. The company continues to collaborate with the FIU leadership team to develop students for post-graduation success and participates in university recruitment, the Women’s Forum, and STEM outreach events.

“Anything I can do to help students pursue STEM fields is my passion.”
Jorge Cisternas always knew he wanted to be an engineer. His father is a computer engineer, but Jorge opted for mechanical engineering. He chose this discipline because it was hands-on, but he never imagined he’d end up working on airplanes. Through the Aerospace Engineering Club at FIU, he found his calling. As club president, he led teams members in the building of an unmanned cargo plane that ranked third worldwide and second nationally in the SAE Aero Design Competition.

A natural leader, Jorge also served as a senator in the Student Government Association and in 2015 was named Senator of the Year by his peers. He created Town Hall meetings with the engineering dean, and also spearheaded the Engineering Showcase held in the Green Library Breezeway. There, engineering students showcased their projects, from model airplanes and cars, to bridges and robots.

After an internship with Lockheed Martin, a global aerospace, defense and security company, he landed a full-time job with the company. Jorge is a systems engineer in the F-35 Joint Strike Fighter program. His job is to create scenarios such as bad weather and engine loss for the flight simulators that pilots use for training.

A love for mathematics moved Somaye Fakharian to pursue a bachelor’s degree in civil engineering while enrolled at the Iran University of Science and Technology. The Tehran native developed a specific interest in transportation after taking a few courses, and was told by professors it was a growing field, particularly in the U.S.

After she earned her master’s degree, she got a job at the Department of Transportation in Iran. She worked there for three years, developing road incident management software and analyzing crash data, among other responsibilities.

When she decided to pursue her Ph.D., she applied to FIU after learning it had a very good reputation for transportation studies. Fakharian left behind her parents, and sister, in pursuit of education and research at the College of Engineering & Computing’s Civil and Environmental Engineering Department.

Fakharian conducted research in CEI’s Integrated Intelligent Transportation System (IITS) Lab, part of the Lehman Center for Transportation Research. She co-founded, in 2013, and served as president of a student chapter for Women’s Transportation Seminar (WTS) at Florida International University (FIU). WTS is an international organization dedicated to the professional advancement of women in transportation. During her presidency, WTS International approved the FIU chapter, making it the organization’s ninth official university chapter.

Today, Fakharian is helping transportation officials make decisions on the future of South Florida’s highways, managed lanes and toll policies. While at FIU, Fakharian submitted 15 articles to journals and conferences in an effort to attract women scholars and transportation engineering agencies.

In Spring 2016, the College of Engineering & Computing hosted its first-ever Student Design Showcase at the Green Library Breezeway at the Modesto A. Maidique Campus. FIU student engineers showcased more than a dozen projects, including a fully functional remote control car, a concrete canoe, an eco car and even a plane, which placed third place at an international competition. Most of the projects were designed for regional, national and international competitions and were designed and fabricated by students.

FIU College of Engineering & Computing
Jorge Riera Díaz is an associate professor in the Department of Biomedical Engineering and director of the Neuronal Mass Dynamics Laboratory. RQJ’s research focuses on the development of methods for the integration of different brain imaging modalities. His current work centers on epilepsy in the animal model of the disease, specifically rats where he’s researching focal cortical dysplasia. His goal is to understand the inflammatory process and neurovascular coupling to help localize the specific area where epilepsy occurs in the brain. In the future, this information could help surgeons pinpoint the area in the brain and target surgical interventions in humans. Riera is currently collaborating with Nicklaus Children’s Hospital, and his research is funded by the National Institutes of Health. He also has a National Science Foundation grant to study cortical spreading depression in migraines. Another area of interest is autism where he has current work centers on epilepsy in the animal model of the disease, specifically rats where he’s researching focal cortical dysplasia. The Laboratory.

Stavros V. Georgakopoulos, an associate professor of electrical and computer engineering, leads research focused on innovations in wireless power transfer and wireless communications. He is working to eliminate the need for batteries across a variety of devices, among them instruments that measure vital statistics and sensors that monitor environmental conditions when mounted on airplanes or cars. He holds multiple patents, including one for “origami antennas,” lightweight, easily deployed equipment of interest to both the military and private aerospace firms. Georgakopoulos has attracted funding from agencies such as the Department of Defense and the National Science Foundation. He was awarded the Top Scholar award from Florida International University.

Niki Pissinou, an Eminent Scholar Chair Professor of Computer Science in the School of Computing and Information Sciences, is widely cited. Her research attracted millions of dollars in research funding from federal agencies, state governments and industry, including NSF, NASA, NSA, DHS, ARO, and DoT. A top scholar at FIU, Pissinou is responsible for research innovations that have significant impact on computer science, engineering, and telecommunications, as director of the Telecommunications and Information Technology Institute, which the foundation in 2001, the over 80 researchers and one of the most prestigious research projects in the future on “future technologies. Her current research focuses on protecting cybersecurity frontiers, including guarding social networks from insider threats; mobile & systems security and privacy; trusted computing; survivability of time-critical systems, and data security and privacy. Her work has appeared hundreds of publications and is widely cited. Her research attracted millions of dollars in research funding from federal agencies, state governments and industry, including NSF, NASA, NSA, DHS, ARO, and DoD.

Nipesh Pradhananga, an assistant professor of construction management. He is the director of the Moss and Associates Built Environment Informatics Lab-RQJ. In the immersive, high-tech computer facility, he uses real-world data and state-of-the-art technology to create virtual simulations, and explore new ways to improve occupational health and safety on construction sites. Pradhananga also works to make the job site an easier place to work. His team has been developing tools to help integrate digital data with the real world using building information modeling, which provides a digital representation of physical and functional characteristics of a facility. The students in the lab take the required data to generate an 3D digital model of the lab then either transition it into virtual reality headsets.

Arindam Gan Chowdhury is an associate professor of civil and environmental engineering and director of the Laboratory for Wind Engineering Research at FIU’s International Hurricane Research Center. Chowdhury is conducting groundbreaking research at FIU’s Wall of Wind research facility, which holds National Science Foundation designation as a national experimental facility, one of only seven such designations in the world. In 2015, the team has worked to enhance building codes, validate innovative mitigation technologies and develop new materials. Chowdhury is a recipient of a Research to Application Award from the Florida Sea Grant Program. In 2012, he received the President’s Council Worlds Ahead Faculty Award, the highest honor FIU extends to a faculty member for excellence in research, teaching, mentorship and service.

Stevin V. Georgakopoulos, an associate professor of mechanical and materials engineering, is the director of the Advanced Materials Engineering Research Laboratory (AMERL). His group’s research focuses on advanced materials development and characterization of materials using electron microscopy, work that in the past year has been supported by the Office of Naval Research, the Air Force Research Laboratory and the National Institutes of Health. Benjamin Boesl, an assistant professor of mechanical and materials engineering, leads his laboratory’s research efforts in advanced nanomechanical test systems with an emphasis on nanobiosensing. His group’s research includes a picocell testing instrument designed for cancer research, a technology that will be used to improve existing diagnostic platforms and help increase the speed and accuracy of lab tests. His group also has a research project to develop wireless power transfer and wireless communications technologies, including experimental tests for space exploration, where he holds multiple patents, including one for “origami antennas,” lightweight, easily deployed equipment of interest to both the military and private aerospace firms. Georgakopoulos has attracted funding from agencies such as the Department of Defense and the National Science Foundation.

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Benjamin Boesl, an assistant professor of mechanical and materials engineering, is the director of the Advanced Materials Engineering Research Laboratory (AMERL). His group’s research focuses on advanced materials development and characterization of materials using electron microscopy, work that in the past year has been supported by the Office of Naval Research, the Air Force Research Laboratory and the National Institutes of Health. Benjamin Boesl, an assistant professor of mechanical and materials engineering, leads his laboratory’s research efforts in advanced nanomechanical test systems with an emphasis on nanobiosensing. His group’s research includes a picocell testing instrument designed for cancer research, a technology that will be used to improve existing diagnostic platforms and help increase the speed and accuracy of lab tests. His group also has a research project to develop wireless power transfer and wireless communications technologies, including experimental tests for space exploration, where he holds multiple patents, including one for “origami antennas,” lightweight, easily deployed equipment of interest to both the military and private aerospace firms. Georgakopoulos has attracted funding from agencies such as the Department of Defense and the National Science Foundation.
FIU President Mark B. Rosenberg announced plans to build a new, $150 million, 225,000 square-foot, LEED Certified Gold engineering building just south of the Modesto A. Maidique Campus. The engineering expansion would mean the graduation of an additional 350 engineers annually and the creation of 550 jobs in South Florida.

In addition to graduating more engineers and spurring job creation, the expansion would increase research expenditures by $30 million annually, and allow for the submission of 27 additional patent applications per year. With the addition of the new building, the College of Engineering and Computing would grow from 2,061 students to 7,500 and increase faculty from 105 to 214.

“FIU wants to increase the number of engineering graduates by 20% by 2020.”

“This engineering expansion will propel South Florida forward by expanding the quantity and quality of jobs, nurturing start-up companies and acting as a collaborative research center. We get it! FIU is a solutions center and we’re determined to do our part to create a tech hub in Miami that will contribute to the prosperity of our region and our state. We’re passionate about developing and keeping talent in our community.” –FIU President, Mark B. Rosenberg

Planned STATE-OF-THE ART engineering complex

Building COLLABORATORIES

- Office of the Dean - Renovation
- Advising Center - Renovation
- Office of Student Access and Success (OSAS) - Renovation
- Tech Station - New
- I-CAVE - New
- Active Learning classroom - New

Tech Station
A $3 million, 8,000 sq.ft hub for technology innovation, teaching and community engagement built to attract the next generation of top computing students.

Active Learning Classroom
This new state-of-the-art classroom features collaborative team tables with a 43-person capacity. Students can check out laptops for use in the classroom, which is designed to provide instructional and digital infrastructure to promote active student engagement in project and problem-based learning.

I-CAVE
The Integrated Computer Augmented Virtual Environment (I-CAVE) is an instructional and research visualization facility that utilizes the 20 cubic feet of immersive virtual space and a completely immersive experience in a virtual space.

FIU wants to increase the number of engineering graduates by 20% by 2020.
ACADEMIC

According to the 2015 ASEE report*:

**#2** in the U.S.
in awarding B.S. degrees to **Hispanics**

**#51**
in awarding B.S. degrees
to **women**

**#8**
in awarding B.S. degrees
to **African-Americans**

*Out of 365 colleges and universities

RESEARCH

**Record-setting year** for research awards

$19.82M

HERD Rankings

2015 data: **#71**
in federal research expenditures

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Continued growth in annual research expenditures

15 **patents**
issued 2015-2017

30+ **faculty fellows**

20 **faculty hires**
6 of whom are women

FIU in the News:

**55** stories

External News Outlets:

**181** print and broadcast stories

Making Headlines In:

- The Miami Herald
- El Nuevo Herald
- Palm Beach Post
- Sun-Sentinel
- Florida Trend
- NBC 6
- Univision
- Telemundo
- ASEE First Bell
- ASEE Prism Magazine
- Forbes
- MSN
- NAE News Radio - WTOP
- Newsweek
- Science
- Smithsonian
- Time
- Weather Channel

(News coverage from April 2016 to April 2017)

**CEC in the News**

**55** stories

**181** print and broadcast stories

**Continued growth** in annual research expenditures


- 2014: $15.76M
- 2015: $17.64M
- 2016: $18.76M

According to the 2015 ASEE report*:

**#2** in the U.S.
preceded only by Puerto Rico in awarding B.S. degrees to Hispanics

**88%**
High in FTIC 2nd Year Retention Rate

**201**
First-Generation Graduates in 2015-2016

**577**
bachelor’s degrees
awarded to minorities

**5,442**
total student enrollment

2015 data:

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