# FALL 2017 VOLUME 38



FIU doubles down on community support and climate research



From left, employees Caprila Almeida and El Pagnier Hudson, students Dominique Rose Ingraham (foreground) and Erika Mitchell

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#### POSTCARD FROM BIG PINE

**KEY:** The Florida Keys saw as many as 25 percent of homes destroyed by Hurricane Irma. When FIU volunteers spent a day cleaning up in the community hardest hit by the storm,

they heard stories of heartbreaking devastation. Yet they also encountered resilient residents who vowed to rebuild and expressed gratitude to those who helped move mountains of debris. Said a grateful Donna Allison, who rode out the storm in her bungalow, "Every little bit helps."

Photo by Kristen Mayoral '11



**HURRICANE RESEARCH** A special section details the year-round work at FIU.

#### WEATHERING THE STORM FIU's emergency response ensured a safe and successful recovery.

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ALUMNA AT THE FORE Bridget Pelaez MA '17 thrives at

the center of response efforts.

HELP IN TRYING TIMES FIU students and graduates help ease others' burdens.

ANSWERING A NEED FIU reaches out to Puerto Rican students whose educations were derailed by Irma.

ABOVE AND BEYOND Members of the FIU family go the extra mile in a time of disaster.

**DR. DISASTER** Disaster expert Richard Olson rates local hurricane planning and response.

#### A FIRST RESPONDER'S THOUGHTS Social work dean shares stories of deployment.

A SPIRIT OF GENEROSITY Support to FIU translates into a more resilient community.

# **MAGAZINE.FIU.EDU** Online-only stories, videos and photos



HATZEL VELA '05 MET IRMA eye-to-eye while reporting from Cuba.



Meet the Class of 2021 as it enters FIU with excellent credentials and great promise.



#### THE MAN WHO INVENTED CHRISTMAS is a major motion

picture based on the book by Creative Writing Professor Les Standiford.

A day in Big Pine Key An FIU photographer and writer document the hurricane damage.



Men's soccer soars They just posted their best season in history.

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## FROM THE EDITOR



As I write this, the hurricane season of 2017 is winding down — and what a season it was. From Texas to Florida to Puerto Rico and the Caribbean, Mother Nature let us know decisively just who is in charge on planet Earth (hint: it isn't us). Story assignments had already been made for the Fall issue of FIU Magazine, but after Hurricane Irma barreled through the Sunshine State, we put those stories on hold. We decided to write instead about the myriad ways our FIU family was impacted by the storm. From preparing a major public research university for a hurricane (and getting it

ready to reopen after the storm passed through), to helping members of the community who had nowhere to turn as the storm raced toward us, to the research carried out by our scientists, to the helping hands lent by our students, faculty, staff and alumni after the storm, we have much to be proud about as a community. We are capable. We are resilient. We are #FIUstrong.

There were some special moments after the storm that reminded me that challenging circumstances often bring out the best in us. The morning that the Green Library reopened to students, in part to give them a cool spot where they could access Wi-Fi, President Mark B. Rosenberg was there to welcome them back. Every one mentioned how special it was to be greeted by our president. Then there was the day I learned that students of East Carolina University were sending our university \$4,723—money they had collected to "assist students in need." Incredible. You will learn of other good deeds elsewhere in the pages of this issue.

As we head into the holiday season, let's all remember how fortunate we are to be surrounded by so much support, and let's all try and pay it forward in 2018. Always Blue and Gold,

Karen a. Cochrane Karen Cochrane



On the Cover: School of Music students held a number of free performances after Hurricane Irma for members of the South Florida community. From left, senior Mary Espinosa, junior Lauren Lopez and senior Victoria Roland get up close and personal with some of their youngest fans. Photo by Doug Garland '10

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#### **ON THE PROWL**

#### Transportation leaders visit FIU's federally designated research facilities

U.S. Secretary of Transportation Elaine L. Chao and U.S. Rep. Mario Diaz-Balart this fall toured FIU's Accelerated Bridge Construction University Transportation Center and the Wall of Wind, both federally designated research centers that study best practices as well as undertake research and development in infrastructure construction.

With a major federal transportation infrastructure bill expected in the next year, many of FIU's technologies offer creative approaches to upgrade the current transportation system in a rapid, costeffective manner without compromising safety, particularly in rural areas.

Chao and Diaz-Balart, who is the chairman of the Transportation, Housing and Urban Development Appropriations Subcommittee and whose district includes FIU's Engineering Center, met with FIU President Mark B. Rosenberg and researchers to discuss university-developed technologies.

"Once again, FIU proves itself an essential solutions center for our country," Diaz-Balart said.



### A new center of Cuban studies

An exciting initiative brings together all things Cuban at FIU. An advisory group of community leaders and a \$200,000 contribution from the John S. and James L. Knight Foundation have made possible the launch of "CasaCuba." The project aims to harness FIU's prestigious scholarly and cultural resources with the eventual goal of constructing a dedicated 50,000-square-foot campus facility complete with meeting space and classrooms.

"There is no location outside of Cuba with a greater connection to Cuban and Cuban-American people than Miami and no university with greater expertise in the study of the island nation than FIU," President Mark B. Rosenberg said. "This new center will be accessible to our students, the larger South Florida community and visitors from around the world."

The academic pillar of CasaCuba will be the Cuban Research Institute, the nation's premier center for academic research and public programs on Cuban and Cuban-American issues, within the Steven J. Green School of International & Public Affairs. Additionally, FIU has significant collections related to Cuban art, history and music as well as digitized assets such as oral history recordings and genealogy records.

#### Students learn to think like problem solvers

First-year Honors College students immersed themselves in exercises and sky's-thelimit brainstorming during Saturday morning "design thinking" workshops aimed at helping them harness creativity and optimize teamwork. Among the directives: "Do not shoot down any idea, even if it sounds crazy." The goal: Teach students to solve problems efficiently and effectively. The methodology involves several steps and can be applied to business and social issues as well as everyday problems.

# Questions

with the VP of Facilities

John Cal is associate vice president for Facilities Management, so hurricane season poses special concerns for him. When storms threaten, Cal's 380-strong team undertakes many of the same precautions as everyone else—installing shutters and pulling in outdoor dining furniture but also sees to the herculean effort of monitoring 120+ buildings over two campuses and several satellite locations both immediately before and after the threat passes. When not in hurricane mode, Cal focuses on the demands of an aggressive capital construction program—more than \$300 million in new buildings in the last five years—while maintaining and upgrading existing structures to meet the needs of a growing research institution.

#### 1. What is key to pulling off FIU's hurricane preparation?

Critical are two programs carried out well in advance of any storm. First, our landscaping program demands year-round activity as we work with a certified arborist to prune trees so that winds pass through branches. While FIU was not immune to damage—as anyone could see from the debris piles on each campus—it is worth noting how many trees withstood the storm. Second, we systematically inspect each building and its major systems so that we have a clear sense of operational and maintenance needs at any given time. Nothing is left to the last minute. On top of that, every member of the Facilities Management team understands the mission and is empowered to act.

#### 2. Post-hurricane, what are you most concerned about?

Our focus is the safety and security of students and employees. Just prior to a storm, we take photos of existing conditions to provide a baseline for poststorm damage assessments. FIU police are the first to patrol the campuses and provide information on roads, electrical lines, buildings and other structures. We then systematically inspect each area of infrastructure.

#### 3. What are the challenges of new construction on campuses?

Modern construction practices generally make it possible to undertake projects while maintaining existing operations. In our environment, that means building state-of-the-art facilities even as we maintain normal campus activities focused on education and research. Our contractors do a great job of providing safe, secure construction sites that do not expose the campus community to hazards or impact classes and campus events.

## 4. How has FIU been able to earn distinction as the most energy efficient in the State University System?

We have built sustainability initiatives on two fundamental premises. First, the greenest, cleanest and most renewable form of energy is the energy you never use. Second, everyone can agree on the value of clean air, clean water and clean soil. We orient all our efforts around those foundations. We have achieved the best energy performance as measured by the EPA's benchmark.

5. How do you view the work of your team as integral to the university's mission? We want to enhance education and research. That starts by providing an environment that people enjoy and that focuses on the individual student and researcher. Without a functional and comfortable environment, the learning process is severely challenged. N THE PROWL

#### **ON THE PROWL**



#### Nationally renowned poet a visiting professor



Famed wordsmith Richard Blanco '91, MFA '97 is currently teaching at FIU. The writer of socially conscious poetry first earned widespread acclaim when he delivered an original work to a nationally televised audience during the 2012 Presidential Inauguration. Since then, Blanco, who makes his home in New England, has been invited to present his poems at a benefit concert for victims of the Boston Marathon bombing and the 2015 ceremonial reopening of the U.S. Embassy in Cuba, his parents' homeland.

He has been featured by major media around the world, and his poems and essays have appeared in numerous publications and anthologies. At FIU Blanco is teaching two courses for the Department of English within the College of Arts, Sciences & Education and another in the Honors College.

#### FIU President takes a leading role in urban coalition



President Mark B. Rosenberg has been named chair of the Coalition of Urban Serving Universities (USU), a commission to assist in the success of public urban research universities and their local communities.

Part of the Association of Public & Land-grant Universities (APLU), the USU aims to leverage the intellectual capital and economic power of urban universities, which are key drivers of community job creation

and are anchor institutions in their respective communities. The USU focuses on student achievement, 21st century workforce preparation, urban health disparities, and smart city issues such as resilience and sustainability. In his role as chair, Rosenberg will help public urban universities across the country further their collective efforts to improve student success and strengthen their communities.

Rosenberg also was recently appointed the APLU's representative on the U.S. Department of Labor's Task Force on Apprenticeship Expansion. That body was formed in response to an executive order to expand apprenticeships and vocational training, close the skills gap and reduce regulatory burdens on workforce development programs.

#### FIU Law back on top

FIU College of Law graduates have again dominated the Florida Bar exam. Just under 88 percent of FIU graduates who took the test in July 2017 passed the test, allowing them to practice law within the state. That represents the highest passage rate among Florida's 11 law schools, which together had a statewide average pass rate of 71.3 percent. Except for a close second-place finish in February 2017, FIU has led the state on the twice-annual exam since July of 2015, making it number No. 1 four out of the last five times the exam was administered.

# Superbugs have a new foe

The National Institutes of Health have awarded FIU nearly \$2 million to study how targeting bacterial DNA can kill antibioticresistant superbugs.

At least 2 million people in the United States are infected annually with bacteria that are resistant to antibiotics, according to the Centers for Disease Control and Prevention. Leaders at the World Health Organization are concerned that there are not enough new medications being developed to treat tuberculosis, pneumonia or urinary tract infections that have adapted to prevent antibiotics from working.

The FIU researchers are studying how enzymes might be targeted to interrupt the process used by bacteria to grow. The one-ofa-kind work could lead to new treatments for people infected with bacteria that don't respond to current antibiotics.



**FIU's ranking, by the Brookings Institution,** among American public universities that simultaneously produce important research while promoting upward social mobility among underprivileged students #6

# AT THE CENTER OF **RESEARCH**

FIU takes a proactive approach to the study of hurricanes

IU's commitment to hurricane research emanates from both the university's location in storm-prone South Florida and the depth of its roster of experts on the subject. With the entire region serving as a real-world laboratory, researchers conduct investigations throughout the year in efforts to understand the spectrum of potential dangers and propose meaningful ways to mitigate them.

"We are in the single best place to study hurricanes and tropical storms as well as to help reduce their impact on human lives and physical infrastructure," says Vice President for Research Andres Gil. "FIU considers it both a duty and an opportunity to find solutions for the immediate community and beyond."

In addition to disaster-related work across the disciplines, FIU has a designated program—the Extreme Events Institute—that brings together studies conducted in the Wall of Wind experimental facility and by the International Hurricane Research Center, which includes laboratories dedicated to the social sciences as well as insurance, financial and economic research.

The following pages describe a number or projects currently under way.

Continues

# NATURE SIGNALS

# Long-term research, short-term extremes uncover clues to survival

By JoAnn C. Adkins, Ayleen Barbel Fattal '06, Evelyn S. Gonzalez and Chrystian Tejedor '04, MBA '15

When extreme weather strikes, nature endures devastation but also reveals secrets to its resiliency. Researchers in FIU's College of Arts, Sciences & Education are investigating the clues that plants, animals and ecosystems leave behind in moments of suffering and recovery. What they find could offer solutions to protecting nature from long-term changes happening to the planet.

Hugh Willoughby knows a thing or two about extreme climate events. Throughout his career, the FIU research meteorologist has flown more than 400 missions into the eyes of storms for the National Oceanic and Atmospheric Administration. Among those was 1989's Hurricane Hugo, which ravaged the Leeward Islands, Puerto Rico and parts of the southeast United States.

"The Caribbean will be the best predictor of climate change," Willoughby said.

Since 2015, data shows energy is increasing in these storms, but there's not enough data to establish a trend. The 2017 hurricane season may change all that. Willoughby says data from recent major storms, including hurricanes Harvey, Irma and Maria, could prove Caribbean temperatures are on the rise. It will take months of data collection and review before scientists can say for sure. But if Willoughby is right, the Caribbean could serve as a barometer for the rest of the world.

Other subtropical and tropical regions are offering clues of their own. In 2005, Hurricanes Katrina, Rita and Wilma attacked South Florida and the Gulf region. In 2008, subtropical China was hit with a devastating cold spell followed by a major drought. In 2010, South Florida suffered its own cold spell. And in 2011, one of the most pristine and untouched coasts in world—Shark Bay, Australia experienced drastic changes after temperatures reached historic highs.

In each of these scenarios, FIU had researchers who have been working in these areas for decades. They have been monitoring conditions, wildlife and plant life. Armed with years' worth of long-term research data, they were able to assess how these isolated weather events impacted their areas. They witnessed catastrophic losses. But they also witnessed stories of adaptation and survival. It's on these moments researchers are focusing with the hopes of developing new methods of conservation and giving policy solutions to mitigate climate change.



#### South China Cold Spell and Drought

In 2008, botanist Hong Liu was watching closely as temperatures started to drop around the Yachang National Orchid Nature Reserve in China. Housed within its 54,000 acres were 29 species of delicate and mostly endangered orchids. The nearly 1,000 flowering plants were relatively new there, having only been moved two years prior by Liu and other orchid conservationists. The orchids' native habitat was to be flooded as part of a large-scale hydropower project along the Hongshui River and the assisted migration was the only chance to save many of the species.

The concept of assisted migration is new and somewhat controversial. It is largely untested and can come with a high price tag. In the case of Yachang, the land is protected but sits at a higher elevation and is not an exact match of the transplanted orchids' native habitat. When temperatures hit the second lowest ever recorded for the region, Liu feared it would be too much for the rare flowers.

Amazingly, the orchids proved largely resistant to the extreme climate event. While some plants did not survive, only one species was wiped out entirely by the cold. When a record-setting drought hit the region a short time later, not a single orchid died. Liu continues to study the orchids at Yachang. It will be years before the assisted migration can be deemed a success, but she is hopeful the orchids will continue to thrive. If they do, assisted migration might become a little less controversial.

#### South Florida Cold Spell 🚽

When temperatures in South Florida dropped below 50 degrees for several consecutive days in 2010 and as low as 35 degrees, FIU scientists knew there would be consequences for plants and animals in the Florida Everglades. They were right.

For nearly two decades, FIU has led the National Science Foundation's Florida Coastal Everglades Long Term Ecological Research Program (FCE-LTER) in collaboration with other universities and partnering organizations across the United States. With substantial monitoring and research data at their fingertips, they were able to assess conditions for many species once temperatures returned to normal. Native, temperate plants and animals fared well. Non-native, tropical ones did not. The results were consistent across many species including mangroves, bees, crocodiles and more. Some took years to recover.

"This short but extreme cold event mimicked the effects of a strong tropical storm or hurricane. The short-term consequences were different but the longterm conclusions were similar," said Evelyn Gaiser, lead principal investigator of the FCE-LTER and executive director of the School of Environment, Arts and Society.

Snook, a popular gaming fish, offered a particularly unique insight. Sensitive to temperature changes, snook should not have survived the cold spell. Yet many were able to shelter in pockets of deep, fresh water that insulated them, said Jennifer Rehage, ecologist with the FIU Southeast Environmental Research Center in the Institute of Water and Environment. The takeaway for scientists: Freshwater flow in the Everglades is critical for fish to survive extreme temperatures.

"The risks to these species are especially high when they are unable to move to more hospitable environments, " said John Schade, program director in the National Science Foundation's Long Term Ecological Research Network, which funded the research. "In a world where extreme climate events are becoming more common, studies like this are critical to our ability to manage the fisheries we need to feed growing human populations." Continues



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#### Continued



Western Australia Heat Wave Across the globe, in the pristine waters of Shark Bay, Australia, a 10-week-long heat wave in 2011 dealt a harsh blow to the 1,853 square miles of seagrass beds in the region as well as the animals that rely on them for food and shelter. Populations of scallops and manna crabs were so adversely affected that fishing of those species was halted.

Marine scientist Mike Heithaus has been studying life in the waters of Shark Bay for more than 20 years. During the heat wave, he and his team observed the hottest temperatures on record in the bay. Along with FIU seagrass biologist James Fourqurean, the research team began an immediate assessment of conditions for plant and animal life. At the FIU study sites, at least 70 percent and as much as 90 percent of seagrasses were wiped out. Today, they are still struggling to recover.

"We wanted to know how much the ecosystem might recover over a few years," said Rob Nowicki, a researcher at Mote Marine Laboratory who conducted much of the fieldwork as a marine sciences doctorate student in the Heithaus lab. "If you take a punch and get up quickly, you're ready for the next punch. But our study has suggested this system took a punch and, in the short term, it has not gotten back up."

If relatively pristine ecosystems like Shark Bay can be this drastically impacted by an extreme climate event, Heithaus and others warn this raises major concerns for areas already damaged by human activity. It also heightens the urgency for international conservation programs and global policy. The researchers continue to study the waters of Shark Bay and other areas throughout the world, working closely with local governments and international governing bodies.

"We wanted to know how much the ecosystem might recover over a few years. Our study has suggested it took a punch and, in the short term, it has not gotten back up."

# EXTINCTION LOOMS

### FOR 2 BIRD SPECIES AFTER DEVASTATING HURRICANES

Conservationists race to save remaining populations

#### By JoAnn C. Adkins

Conservation biologist Paul Reillo is torn between two worlds in the aftermath of hurricanes Irma and Maria — one of swift action and one of waiting.

There is little time to rest. More than 200 animals, many fighting extinction, are relying on him. The FIU scientist is the founder of the Rare Species Conservatory Foundation (RSCF), a partner in FIU's Tropical Conservation Institute (TCI), which offers safe haven, captive breeding programs and field-based conservation to help save endangered species. In a matter of two weeks, two species of birds on the brink of extinction were dealt devastating blows when hurricanes Irma and Maria crossed the Caribbean, leaving devastation in their wakes.

> The Imperial Amazon (left) and the Florida grasshopper sparrow

The team at the Tropical Conservation Institute knows it is facing an unprecedented conservation crisis.

#### WORKING

Hurricane Irma caused more than \$200,000 in damages at RSCF's property in Loxahatchee, Fla. Little could be done to save enclosures and fences from the storm, but Reillo and his team secured the animals, including 40 endangered east African bongo antelopes, 35 primates including endangered golden lion tamarins, nearly 100 parrots representing a variety of threatened and endangered species and 42 critically endangered Florida grasshopper sparrows.

The TCI team is putting in long hours to rebuild what was destroyed and to help the animals recover from the stress brought on by the storm. The Florida grasshopper sparrows are the greatest cause for concern. It is the world's most endangered bird with less than 100 remaining in the wild before Irma. The team is working with state and federal wildlife officials on strategies to help preserve the small number of birds that remain on the planet.

#### WAITING

Meanwhile, Reillo is waiting for news about Dominica's critically endangered Imperial Amazon. Since the late 1990s, he has been working with Dominica's Forestry, Wildlife and Parks Division to help restore the rare parrot's population in the wild, which has been devastated by habitat loss, the pet trade and natural disasters. In 2000, the local government established a national park to protect critical habitat for the rare parrot species. Reillo raised many of the funds himself to purchase the land necessary for the initiative. Hurricane Maria, in a single day, destroyed more than 20 years of work to save the species. "The flagship species we have fought to save for so many years may now face imminent extinction," Reillo said, pausing for a rare break from post-hurricane cleanup.

When Maria marched across the Caribbean, the expansive forests of the island were decimated, destroying critical habitat for the Imperial Amazon. Fewer than 250 mature Imperial Amazons were known to populate the forests before Maria. Local forestry officials have been looking for any signs that some of the rare parrots weathered the storm, but the bird is elusive under normal circumstances. These are not normal circumstances.

"Recent hurricanes have proven how very vulnerable many species are," said Mike Heithaus, dean of FIU's College of Arts, Sciences & Education, which houses TCI. "Our programs can make the difference between an animal being here and not, but the monumental task before us is going to require tremendous local, national and international support."

Even if Imperial Amazons survived, the catastrophic destruction of the island's richly biodiverse forests is causing alarm for conservationists. Locals have spotted the more common Jaco parrot among the gutted forests, but those are struggling to find food. Their plight represents a much larger crisis looming over Dominica's wildlife.

Reillo believes the Imperial Amazon has a fighting chance. Researchers and forestry officials are trying to assess the status of the population and develop a strategy for recovery. The FIU Tropical Conservation Institute team is preparing for an aggressive plan that Reillo knows will come at a significant cost. But the alternative—loss of another flagship species—poses a far greater cost to the health of the planet.

TCI is supported by the Batchelor Foundation, which has provided a challenge grant to support its many critical programs. Contributions received to help save the Florida grasshopper sparrow and the Imperial Amazon could be matched by the grant. To give, please contact Ady Arguelles at 305-348-7942 or aarguell@fiu.edu.

# PREDICTING THE HEXT BIG ONE

By JoAnn C. Adkins

he 2017 hurricane season will go on record as one of the most active and devastating in recent history, yet people are far better prepared today thanks in large part to better predictions. FIU researchers think the science of storm forecasting can be even better.



Professor Haiyan Jiang, left, with doctoral candidate Yongxian Pei

FIU researchers and students are investigating new methods to further increase the amount of time people have to get out of harm's way. They are developing new modeling techniques and searching for signals embedded within storms that could offer clues to a hurricane's path, projected intensity and probable impacts.

There's only one problem—rapid intensification is unpredictable. FIU meteorologist Haiyan Jiang hopes to change that.

Using passive microwave satellite observations, Jiang has developed an algorithm that can help predict the onset of rapid intensification of major storms. Forecasters at the National Hurricane Center and the Navy's Joint Typhoon Warning Center are now using her data throughout the hurricane and typhoon seasons to improve storm modeling.

Jiang's former student Brad Klotz, who earned his Ph.D. from FIU in 2017, is in search of the strongest winds in hurricanes. As a Ph.D. student, he studied how ocean surface winds interact

with characteristics of hurricanes including

strength and speed. If forecasters can use

surface winds to help identify the location

may be able to better predict the location

of the most devastating landfall impacts.

In addition to better forecasting before a

out recovery efforts well before damage

the National Oceanic and Atmospheric

Klotz is continuing his research.

storm, this information could also help map

has even occurred. As a meteorologist with

Administration's National Hurricane Center,

Storm surge is another issue. Coastal

communities and island nations are highly

before, during and after tropical storms and

vulnerable to the surge often created

of the strongest winds in a storm, they

Better predictions can save lives. Researchers from FIU's Extreme Events Institute are working with the National

Institute are working with the National Hurricane Center to develop a storm surge database for Haiti and the Dominican Republic. Led by Earth and Environment researcher Keqi Zhang, their efforts are improving storm surge forecasting for the shared island of Hispaniola. The information could help local governments make more informed decisions when hurricanes approach, including when to evacuate.

hurricanes. The impacts can be deadly.

With most natural disasters, nature is rarely the problem. The devastation is caused by people living in the direct path of nature. Ignoring potential disasters until they are a clear threat to people is no longer an option, according to geologist José F. Longoria, who researches earthquakes, volcanic hazards and floods. Educating people about their vulnerabilities as early as elementary school, he said, will help them better understand the actions that must be taken to mitigate disasters.

"When nothing happens, no one worries," said Longoria, who teaches a course on natural disasters at FIU. "Look at us when we are not in hurricane season. Nobody talks about it, nobody prepares."

But FIU is talking about it. Talking about it and trying to do something about it. Before 1992's Hurricane Andrew, the university did not offer a class focused solely on disasters. Today, there are more than 25 and the Extreme Events Institute and Sea Level Solutions Center are leading research and community outreach programs to prepare Florida for the challenges ahead.

Accurate predictions may be the most powerful tool people have to mitigate the wrath of hurricanes.

#### ASSESSING BRIDGE SAFETY POST-STORM

By Millie Acebal



FIU will collect baseline data on Miami-Dade and Broward county bridges and other infrastructure that can be used to rapidly assess damage the next time a hurricane strikes. After Hurricane Irma made a direct hit on the Florida Keys, authorities expressed major concern about the island chain's bridges. Would they be safe for crossing by evacuees anxious

to drive back home? Would relief efforts be impaired due to damage caused by massive winds? Fortunately, all 42 bridges that connect the mainland to the Keys were inspected and declared safe by Monroe County officials.

Atorod Azizinamini, director of the Accelerated Bridge Construction University Transportation Center and one of the world's leading bridge engineers, wants to simplify how engineers determine bridge safety after a storm or any other catastrophic event.

Currently every span has to be inspected visually once every two years to determine whether it is safe or not. More detailed inspections are conducted in some instances, but that occurs in less than 10 percent of cases. Azizinamini has a plan to begin collecting baseline data that will improve the process in the face of disasters.

"We can establish the 'signature' of a bridge before a hurricane occurs to familiarize ourselves with its characteristics," said Azizinamini, who is chair of the Department of Civil and Environmental Engineering within the College of Engineering & Computing. Knowing those baseline characteristics "will make it a lot easier to assess damage after the hurricane because we will be able to identify deficits in the structure."

The data will be collected with several techniques, among them drone and satellite technologies that capture information through images; light detection and ranging, or LIDAR technology, that uses laser pulses to take measurements; and impulse-response testing, which generates stress waves to identify any areas of deficiency. The last provides the most detailed data, Azizinamini explains, and perhaps the best approach to answer the all-important question, "Is this bridge safe to remain in service, or should we close it for repair?"

The tools help establish the condition of a given structure at any point in time. After a hurricane or other natural disaster, inspectors use the same tools to collect post-event data and make before-and-after comparisons to assess where and how much damage has occurred. Azizinamini hopes to begin working soon with government officials to gather the baseline data for specific bridges that may be at risk.

#### **RESEARCH FOR A SAFER FUTURE**

#### FIU's portable weather tower collected

meteorological data during Hurricane Irma's landfall. The device is designed to capture changes in heat, moisture and momentum in the lowest part of the atmosphere, where wind gusts form. It is the turbulence in this area that ultimately causes damage to structures and nature. Along with data from other storms, the information collected by FIU will be used in simulations and inform the ongoing work of wind engineers.

#### FIU was part of a "structural engineering

**reconnaissance**" **project** aimed at surveying the impact of Hurricane Irma. FIU's team investigated conditions in Miami, where it documented mostly fallen trees, and in the Florida Keys, where it recorded more than 200 individual cases of damage. The data—shared with academic partners working in the U.S. Virgin Islands and Puerto Rico—should ultimately help researchers suggest improved approaches to mitigation.

FIU's Metropolitan Center annually receives funding from the state for social science research on issues related to perceptions and practices of hurricane readiness. The center focuses specifically on the densely populated counties and surveys residents about issues such as their awareness of living in a flood zone, overall confidence in local mitigation efforts and what additional steps citizens would like government to take. Based on public opinion findings as well as investigations into the workings of programs such as National Flood Insurance, the center offers solutions to improving preparedness at the community and state levels.

#### The Wall of Wind in the College of Engineering

and Computing has played a big role in boosting the South Florida building code—now among the strongest in the nation—in the two decades since Hurricane Andrew's devastation of the region. The most powerful wind simulator of its kind at a university, it creates conditions that mimic a Category 5 hurricane to scientifically test components and whole structures with the goal of improving the sustainability of coastal communities.

Led by the College of Business, researchers from Florida universities have estimated the statewide wind-related losses from Hurricane Irma. Using the Florida Public Hurricane Loss Model to calculate financial and insurance impacts, the team put damage at \$19.4 billion. The estimate is based on preliminary data provided by the National Oceanic and Atmospheric Administration and will be revised as more information becomes available. In addition to experts in finance and actuarial science, FIU involvement included specialists in meteorology, storm surge, hydrology, engineering, computer science and statistics.

# [FOCUS ON INNOVATION] Building hurricane-proof roofs

FIU

n FIU professor has a plan to get rid of the blue tarps that inevitably appear on rooftops after a hurricane.

Arindam Gan Chowdhury has patented a concrete roofing system that aims to replace the hundreds of individual shingles or barrel tiles, not to mention thousands of nails as well as plywood sheathing and wooden trusses, that often put housetops at risk.

"Why have so many elements?" the civil engineer asks. "Any weak link creates a domino effect," with a small break or a misstep in installation potentially escalating into serious damage.

Chowdhury's solution: Replace all those components with a monolithic structure, in this case a series of conjoined concrete panels, each of which measures about 4 feet wide and up to 30 feet long and features an inch-thick wavelike pattern. The panels would be fabricated off site and then connected to one another atop a home using interconnecting joints before being secured to the building's masonry block via a steel strap or metal rod.

Manufacturing the panels in a factory allows for the kind of quality control that is often impossible with current roofing systems, the integrity of which depends largely on the skill of installers, Chowdhury explains. Labor costs for the concrete panel installation would likely be lower than those for traditional roofs as the work is expected to take less time. The price tag on the panel rooftop—constructed in the sloped shape common to homes—is comparable to the total cost of all materials that go into other roofs. And the heft of the panels is no greater than the combined weight of all the elements of a standard roof.

Chowdhury, who directs the NSF-funded Wall of Wind Experimental Facility, and his team have tested the innovation under simulated Category 5 wind effects with great success. "We have not had any failures," he says.

Designed with aesthetics in mind, the panels have the potential to be colored to fit a homeowner's tastes. A red dye, for example, can be infused into the concrete mixture before pouring to create a product that resembles clay tiles. Chowdhury also has patented a system compatible with commercial flat-roof buildings. The university is in talks with companies interested in potentially manufacturing the technology.

Separately, Chowdhury has applied for a patent on a system of screwlike turbines that can be mounted to a building to interrupt the powerful vortices of air generated by strong winds as they travel up and over the roofline. Such vortices are responsible for ripping away tiles and shingles and even pulling off whole roofs as they create upward lift. For those who do not have in place the concrete roof panels Chowdhury has devised, the turbines might be the next best way to avoid destruction.

# Hoping for the DEFINITION OF THE WORST

#### Emergency operations team safeguards university community against Hurricane Irma

#### By Clara-Meretan Kiah '15

As Hurricane Irma crawled west through the Caribbean, South Floridians scrambled to shutter their homes, braved hours-long waits for a share of the dwindling gasoline supply and raced to snatch up cases of water and generators flying off store shelves.

Meanwhile, a team trained in disaster response assembled in FIU's Emergency Operations Center (EOC), a 1,630-square-foot reinforced facility in Parking Garage 5 at the Modesto A. Maidique Campus that would become the hub of decision making at the university during the hurricane.

"Now's the time to step up to the plate," Assistant Vice President for Disaster Management and Emergency Operations Ruben Almaguer tells the group of administrators who represent operations, facilities, student housing, law enforcement and other key areas.

They're gathered around tables, some with notes in hand detailing immediate concerns. The day's action plan is outlined on white boards, televisions are tuned to local and national news, and landline phones are connected to ensure direct calling as needed to the National Hurricane Center and county and state emergency operations centers.

The mission: Safeguard a university with 56,000 students, 10,000 employees and a \$9 billion economic impact against a storm with the potential to level South Florida, and provide support to the broader community.

"We have to plan like a Category 5 will hit Miami-Dade County. We prepare for the absolute worst, but continue to hope for the best," Almaguer explains.

Led by Almaguer and Emergency Management Director Amy Aiken who together have 50+ years of experience in the field at the city, county and state levels—the EOC team is charged with mitigating potential damage that could endanger FIU's ability to get back to the business of education once the threat passes. They coordinate the logistics of battening down buildings; sheltering campus residents and Monroe County evacuees; communicating important updates on the storm as well as university closures; and cleaning up post-hurricane.

The 40 EOC members meet every semester to participate in a daylong simulation that challenges them to implement emergency protocols in various scenarios. They are guided by the university's Comprehensive Emergency Management Plan, which covers all potential emergencies including cyberattacks, active shooters, civil disturbances, pandemics and more. Response-and-recovery strategies are updated based on lessons learned from exercises and actual activation. (The 7-year-old center has been activated only twice before, both times for less-menacing hurricanes.)

Jonathan Lord, deputy director of the Florida Department of Emergency Management, said using the Incident Command System - a standardized structure for coordinating emergency personnel and resources that is considered best practice by military and government agencies – is key to FIU's ability to seamlessly manage, coordinate and communicate its emergency and disaster services and information, both within the FIU community and with external local and state partners.

"FIU provided unprecedented support to Florida residents and students in response to Hurricane Irma," Lord said, acknowledging public universities and colleges statewide for their exceptional responseand-recovery efforts.

Communication is key during crisis. Led by Assistant Vice President Maydel Santana, the team sent daily updates on behalf of the president to inform students, employees and the community about the university's status, encourage hurricane preparation and safety, and address questions of greatest general concern as monitored by the FIU call center.

"Seeing our EOC in action is truly impressive," Santana said. "There's a lot of heart in this team that came together to coordinate important work for the benefit of our students and the broader community."

Continues

# In the path of the story



#### Monday, Sept. 4

Florida Governor Rick Scott activates the state's National Guard to help with preparations as Hurricane Irma batters the Leeward Islands, 1,200 miles west of the Florida Keys. At FIU, where the Labor Day holiday has kept students and employees away from campus, President Mark B. Rosenberg and key administrators continue to monitor the storm at the Emergency Operations Center (EOC) at the Modesto A. Maidique Campus which will become the university's central nervous system for the duration.

#### Tuesday, Sept. 5

President Trump declares a state of emergency in Puerto Rico, Florida and the U.S. Virgin Islands as Hurricane Irma explodes into a Category 5 beast, laying waste to the Caribbean islands of Antigua and Barbuda and others. In direct communication with the National Oceanic and Atmospheric Administration as well as local and state governments, the leadership team assembled at the EOC shares information with Rosenberg and he moves to cancel classes on Thursday and Friday. Students who live in residence halls are encouraged to leave. The work of securing campus buildings begins.



#### Thursday, Sept. 7

With 120+ buildings on two campuses secured and precautions in place at the university's three Miami Beach locations (The Wolfsonian and Jewish Museum of Florida and the Miami Beach Urban Studios design space), the FIU Facilities team focuses attention on the university's more than 700 laboratories, all of which will sit idle for an extended period. With more than \$171 million in research at stake, FIU acts to safeguard both on-campus and external sites such as its underwater research Aquarius Reef Base off the coast of Key Largo as well as agricultural projects at Fairchild Tropical Botanic Garden and elsewhere.





#### Wednesday, Sept. 6

Highways I-75, I-95 and the Florida Turnpike slow to a standstill as millions evacuate the coast. With Irma changing course on an hourly basis, many residents decide there is only one way to escape: Go north. For those driving up from the Florida Keys, FIU opens the doors of the Ocean Bank Convocation Center. Run by the Red Cross, the Florida Department of Health and Monroe County, the shelter in the coming days will welcome 500 evacuees. FIU custodial workers assist in keeping the facility clean and FIU students and employees help in assessing immediate needs and pressing concerns among the displaced.

#### Friday, Sept. 8

More than 350 students who live on F refuge in the reinforced hallways of P housing staff oversee operations ther adequate supplies and food—to be c employees—remain available and that the ready. All other campus residents rooms to the safety of family.

#### Sunday, Sept. 1

A downgraded Hurrica as a Category 3 as it h battering South Florida winds and heavy rain i landfall in Collier Coun on its way to Orlando a million residents witho storm's passing, FIU le at EOC headquarters a campuses to assess d damage including felle in buildings and broket Everyone agrees it cou





#### Monday, Sept. 11

EOC leadership continues to meet twice daily, as it will for another week, to coordinate cleanup efforts and ensure the safety of buildings. Damage reports and costs for repair work to restore every aspect of the campuses are documented carefully. The information will be submitted to the Federal Emergency Management Agency as part of FIU's formal application to request reimbursement.



#### Thursday, Sept. 14

A team of doctors, nurses and other disaster responders from the U.S. Public Health Service arrives to relieve county and state responders working 12-hour shifts at a special-needs shelter on campus. Up to 100 elderly and ill Keys residents are cared for at the location, many still uncertain about the fate of their homes in the hard-hit island chain. FIU employees, fresh from their own experiences with the storm and many still without electricity, are called back to work in preparation for resumption of classes the following week.

IU's two campuses seek arkview Hall. University and ensure that boked on site by cafeteria t backup generators stand at have vacated their dormitory

#### 0

he Irma blows past Miami eads toward the Gulf Coast, with tropical storm force the early hours. After making y, the storm turns northward and leaves more than 10 it power. Within hours of the aders who spent the night re on the ground at both amage. They find landscape d trees, minor flooding, leaks i light posts and signage.



#### Tuesday, Sept. 12

As the greater community begins to take stock of local destruction and recognizes the financial and emotional burdens on those hit hardest in the Keys and elsewhere, a sense of hope emerges in the shared struggle. In one of his first post-storm messages to the FIU community, Rosenberg captures that feeling when he reminds everyone, "Together we rise." Out of that message, the hashtag "FIUstrong" takes hold as social media lights up with stories of resilience and neighbors helping neighbors.



#### Monday, Sept. 18

Only a week after the hurricane, FIU reopens to students. Contractors have worked tirelessly since the storm to collect debris from campus and to tend to whichever downed trees can be saved. Facilities personnel completed a thorough inspection of every building prior to giving approval for classroom occupancy. Remediating water damage at the privately owned and managed Bayview residence hall at the Biscayne Bay Campus remains a top priority as students are unable to return to their apartments for another day.

#### Friday, Sept. 22

Governor Rick Scott visits the campus specialneeds shelter, which has welcomed dialysis patients evacuated from the hard-hit U.S. Virgin Islands. FIU students enrolled in graduate nursing, physician assistant, social work and other programs assist the professional staff in looking after the health and comfort of evacuees. The university administration addresses lingering concerns when its Division of Students Affairs quickly restocks the student food pantries on both campuses in recognition that some families are struggling financially in the storm's aftermath, and the Division of Academic Affairs announces a decision to extend the current semester by one week to make up for lost class time.



# **Command performance**

### Elected officials visited FIU to support South Florida in a time of need

Government officials joined hands with FIU to bolster the spirits of those affected by Hurricane Irma and to throw their support behind the university's efforts to meet ongoing needs. In the days following the storm, President Mark B. Rosenberg welcomed national, state and local representatives in a show of solidarity with evacuees, first responders and the people of South Florida in general. They toured the shelters on campus and gathered with students and employees volunteering there under the direction of the United States Public Health Service, the State of Florida Department of Health, the Monroe County Public Health Department and the American Red Cross. And they met with FIU's emergency operations team to hear directly from those who secured the campuses and coordinated the university's planning-and-response activities throughout the storm.

Among the visitors were Gov. Rick Scott and Lt. Gov. Carlos Lopez-Cantera; U.S. Secretary of Labor Alexander Acosta; U.S. Rep. Carlos Curbelo; state Sen. Oscar Braynon; and state Reps. Jeanette Núñez, Jose Felix Diaz and Daniel Perez.

The activities undertaken by individuals and their offices included restocking the FIU student pantries, supplying and serving meals, and providing a special wheelchair for an evacuee, among others.

"These are public servants who came to help those displaced by the storms," said Vice President for Governmental Relations Michelle Palacio. "They were doing anything they could to help their neighbors from Miami-Dade, Monroe County, Puerto Rico and the Virgin Islands. Not for publicity, but because it needed to be done. Each of them helped make this experience more comfortable for those who had been away from home for days and weeks."









# "These are public servants who came to help those displaced by the storms."

-Vice President for Governmental Relations Michelle Palacio

# A force of Nature

Bridget Pelaez MA'17 eats, breathes and sleeps disaster recovery

By Eric Barton | Photos by Doug Garland '10

Considering her schedule, Bridget Pelaez is surprisingly chipper for midmorning on a Wednesday. In the days since Hurricane Irma made landfall in the Florida Keys, she has been sleeping—poorly—on a bus in a parking lot in Marathon. Luckily, she found a place to shower the day before, a bathroom at a partially destroyed marina. There was no hot water, but she still described access to any running water at all as something of a luxury.

A paramedic and a nurse. Pelaez would be well qualified for a hospital job. Instead, the always-moving 33-year-old helps run the FIU-Florida Advanced Surgical Transport Team, an all-volunteer group of medical professionals who drop into disaster zones to tend to the injured. Her title is flex commander, a role that has her developing schedules for dozens of nurses and doctors one minute, servicing a generator the next and assisting on surgeries as needed. On that Wednesday on the sweltering bus, she had been at it for two weeks, first in Houston following Hurricane Harvey's destruction there and then in the Keys. She could count one good night of sleep in all that time.

With no bed or fully working bathroom available to her, Pelaez chooses to relish the few small things she does have. Like her supply of Gatorade packets, a travel pillow, sunflower seeds (which she chews to help her stay awake) and a required stash of Cuban coffee.

"Focusing on my lack of comforts just doesn't feel right when there are so many people who lost everything," she says.

Her attitude is in part a product of her past, the South Miami kid who was always doing things for someone in need. It also comes out of her training through FIU's Department of Emergency Management, where she received a Master in Disaster Management in 2017.

Upbringing and education, however, can't totally prepare someone to forego sleep and

a decent shower for the better part of two weeks. And that's what makes Pelaez special: She is ready, willing and able to go without.

#### Nerves of steel

In 2011, Pelaez, in a full HAZMAT suit, walked out onto a thin metal walkway at the edge of a nuclear bomb crater. Below her was a 450-foot drop into a canyon of radioactive Nevada desert.

Beside her was Raj Maragh. They were both training to be part of an emergency response team, and one challenge involved visiting the site of a nuke test. The exercise was meant to give participants an unusual view of devastation. It also tested their mettle: Will you take those first steps to the edge of the crater, or turn around and find a new career?

"Take a volcano and put it upside down. That's what it looked like," Maragh recalled. "It's real. It's not a simulation. There we were, on top of where a nuclear bomb was detonated."

Every person there looked understandably nervous. Except for Pelaez. She just seemed to get calmer under the pressure—a habit of hers in times of high stress. "When things are hairy, you get this sense of confidence in her that everything is going to be taken care of, that it's going to be OK," Maragh said.

#### A history of helping

As an athlete at South Miami Senior High—where she played volleyball, soccer, softball, basketball and golf—Pelaez earned the nickname "Mother Theresa" for always wanting to take care of teammates when they were injured.

"She was very outgoing and always interested in volunteerism," recalled classmate Steve Lora, remembering how Pelaez would hold blood drives when there was a tragedy somewhere. "She just has this way of helping people, and it was evident even back then."

Pelaez went on to enroll in the fire academy Continues

#### Continued



signing up for various kinds of training. One program focused on responding to nuclear and biological attacks, and that's how she found herself standing next to a nuclear bomb crater in Nevada.

Today Pelaez is looking for a fulltime administrative position in disaster management—someone who can help manage deployment while working on strategy and prep between team deployments—as there are actually few paid jobs in disaster response. Most responders deploy as unpaid volunteers, often with the blessing of their regular employers.

"For the past 10 years, I've had to explain to friends and family about this path I'm on," Pelaez said. "But the happiest times in my

"For the past 10 years, I've had to explain to friends and family about the path I'm on. The happiest times in my life have been when I'm caring for the most vulnerable."

—Bridget Pelaez MA'17

to become a firefighter and paramedic. With those credentials in hand, she signed up to begin volunteering with various disaster response teams.

Following the devastating 2010 earthquake in Haiti, she went to the island with the National Disaster Medical System team and Baptist Health South Florida. Half of each day there she hung drywall and mixed concrete to rebuild a hospital. Then she'd switch to treating patients. Mostly she saw gastrointestinal diseases in children so impoverished they could afford nothing more to eat than biscuits made of dirt mixed with shortening. "They would pound their stomachs with their fists because of the hunger pains," she said.

That experience encouraged her to pursue a nursing degree, even as she continued to strengthen her disaster response skills by life have been when I'm caring for the most vulnerable."

#### No drama queen

In 2016, Pelaez enrolled in FIU's Master in Disaster Management program, and like all her fellow students, she'd have to endure one especially tough 48-hour stretch to earn her degree.

That tough final exam involves a disaster simulation on FIU's Biscayne Bay Campus where students spend two days sleeping in a tent, eating freeze-dried meals out of a bag and using a bucket as a bathroom.

"It's not pleasant," said Ruben Almaguer, FIU's Assistant Vice President for Disaster Management and Emergency Operations. In 2015, FIU became the first university in the state and one of only a few institutions in the country to offer a master's degree in disaster management. "Some people have it in their DNA, and some just don't."

For those who don't, their future likely will not include field work, and instead they'll be headed for an office job. Then, Almaguer said, there's people like Pelaez, who simply relish those tests of will.

"She does these things because she's good at it and because it's important. She simply has a real compassion for others and doesn't care what she has to sacrifice herself," he said.

After the flood waters rose in Houston from Hurricane Harvey, Pelaez headed there as part of the National Disaster Medical System team. During the day, she served as the team's deputy commander, leading meetings and serving as a point of contact, helping coordinate where and when nurses and doctors would be deployed. At night, after her full day of administrative tasks, she'd volunteer at makeshift temporary hospitals.

She saw patients with septic shock likely caused by contact with contaminated flood waters. Others suffered respiratory problems exacerbated when their ventilators lost power. Those involved in post-storm cleanup presented with chainsaw lacerations and injuries from falls off ladders. Some came in with gunshot wounds, not uncommon in the widespread looting that often follows such disasters. For the most serious cases, she arranged for transfers to a local hospital.

Pelaez spent nine days in Houston, sleeping mostly during the 10- or 20-minute bus rides that took her to whichever location needed her next. She was back home in Miami one night before she had to ready herself for Irma. She spent the days before the storm amassing supplies and directing volunteers to where they'd be needed after the storm made landfall. As the track shifted from the east to west coast of Florida, Pelaez was forced to rethink the plans by the minute.

The storm made landfall on Sept. 10, and

by 8 p.m. that night, Pelaez had sent assignments to 82 volunteers working with the FIU-FAST team. They dispatched to hospitals in South Miami, where ERs had begun filling with those injured in the storm.

At West Kendall Baptist Hospital, Pelaez found herself working with an old friend who had stood with her at the nuclear bomb crater years ago. Raj Maragh is now the emergency preparedness and security director for Baptist Health South Florida. Pelaez's arrival at the hospital, her team in tow, made for a smooth landing all around. Where clashing egos could have heightened an already difficult situation—a growing number of patients awaited care—she instead used her inborn skills to almost seamlessly schedule her personnel into the existing conditions.

"You have to understand that Bridget makes it not about her," Maragh said. "It's always, 'What can I do, Raj? What can I do to help?' She's just a go-getter, and you have the confidence in her that everything is taken care of."

#### Meeting the demands of an active hurricane season

Pelaez had one day off before heading back to FIU to log a new shipment of medication and then head with the FIU-FAST contingent to Marathon, where Fishermen's Community Hospital was damaged beyond use. The team set up a 19-by-35-foot shelter with AC, lights and medical equipment powered by a generator, and soon the hospital staff was seeing 60 patients a day in the temporary space.

With the tent hospital up and running, Pelaez spent two days demobilizing her team. But before she could truly rest, she began looking at what was next. She spoke with officials in Dominica, St. Thomas and Puerto Rico about whether her team could deploy there. They'd need transport, likely from a military cargo plane, which sometimes drops them on a runway with just five minutes to unload. (They ended up not going.)

Whether she would sleep or get a hot shower between the two deployments, she had no idea. People ask her about it a lot, how she can so easily put aside any concern for her own needs. Her response sums her up perfectly:

"I'm kind of that crazy girl who will tell people that I want to help save the world." ■



## Answering the call for help

The only civilian crew of its kind in the nation, the Florida Advanced Surgical Transport team joined the FIU family in April 2016 through a partnership with the Herbert Wertheim College of Medicine and the university's Department of Emergency Management. Commonly called FIU-FAST, the all-volunteer squad deploys medical professionals to perform critical care medicine after disasters. The team comprises nearly 100 individuals including trauma surgeons, emergency medicine doctors, nurses and other support personnel.

Members deployed almost immediately after Hurricane Irma when the Florida Department of Health asked it to assist West Kendall Baptist Hospital in handling its surge of emergency room patients. Six physicians, six nurses and a paramedic arrived at the hospital at 1 a.m. to find 92 patients waiting in the ER. By 3:45 a.m., only 30 remained, thanks in part to the extra hands. They treated patients with lacerations, the flu and a possible stroke, among other ailments.

The following day, members again helped at West Kendall Baptist and also at Jackson South Community Hospital to reduce patient wait times and tend to those with less complex medical emergencies so that hospital staff could focus on acute injuries.

While its main mission is to assist after disasters, FIU-FAST has deployed in other instances as well.

In February, the team made a mission to Puerto Barrios, Guatemala, as part of Continuing Promise '17, an ongoing military/civilian project led by the U.S. Southern Command that provides medical and veterinary assistance to its partner nations and organizations. In the course of the trip, a surgical nurse, a paramedic and six physicians treated approximately 1,500 patients in a makeshift clinic set up on an indoor basketball court with no air conditioning. They also helped distribute much-needed medical supplies to a local hospital and orphanages.

Last May, the team set up a 10-bed critical-care field hospital in Miami Beach for the Memorial Day weekend, marking the first time it partnered with local first responders.

# From the heart

Alumni and students take action in the face of others' despair

By Joel Delgado '12, MS '17, Alexandra Pecharich and Chrystian Tejedor '04, MBA '15

Disasters can bring out the best and the worst in people. Members of the FIU community collectively have shone as a positive force in the wake of devastation. Whether as an extension of their jobs or in personal efforts, they prove that Panthers rise to the most difficult of occasions and do so with pride.

#### See how students helped in campus shel magazine.fiu.edu

#### Helping the homeland

Hurricane Maria's touchdown in Puerto Rico just two weeks after a pummeling from Hurricane Irma left the island reeling. (Officials called the devastation "apocalyptic.") A total loss of electrical power and downed communication channels made getting out immediate word to friends and family in the United States nearly impossible.

"It's complete desperation," Miami attorney Nicole Ramos, a 2005 FIU Law grad, said of what she felt as she worried about loved ones in her homeland. Almost a week after the destruction, she still had no idea how an elderly aunt and uncle as well as a close friend had fared. "That's the worst part," she said. "I just need to know."

Channeling her worries into a productive outlet, Ramos turned her Coral Gables apartment into a makeshift warehouse as she quickly began soliciting nonperishables from neighbors and checks and Venmo contributions from coworkers and Facebook friends. In addition to the nearly \$1,000 in donations she spent at Walmart in the first days after Maria, she also received Amazon deliveries of diapers and toiletries from folks as far away as New York. She took all the supplies to a local collection center that had arranged for shipping.

"I grew up there and seeing the videos and photos of people who are hungry, hot, thirsty for me, it just hits my heart," said Ramos, who shares a home with her mother and 7-year-old son. "I had to do something."

The concentrated activity served as a temporary distraction from her growing fears. She suffered endless sleepless nights and spent countless hours combing the internet for any news or photos of her relatives' hometown. And she took to social media in a quest to locate her friend. (She would eventually learn that all three, though shaken, had come out fine.) In the midst of her

torment, Ramos found hope in the collective good will of those around her.

"What is beautiful about this is that strangers reach out," Ramos said, "and we're all coming together as a community."

#### School leaders take charge

As Hurricane Irma aimed for South Florida, Bianca Calzadilla '97, MS '00, Ed.S. '03 and John Galardi '02 were each pressed into duty to ready their schools in anticipation of sheltering a combined 3,000 people.

With almost 40 evacuation centers already nearing capacity, Miami-Dade County looked to public school buildings as more people sought refuge from a potential direct hit from the Category 5 storm with winds exceeding 150 miles per hour.

Supported by custodial staff, volunteers, national guardsmen and police, Calzadilla and Galardi took charge of their respective teams and opened their doors. "It was automatic, we knew what had to happen," said Calzadilla, principal of Shenandoah Middle School in Miami. "There was no question what needed to be done. There was no question we needed to be there."

In Homestead, Galardi's South Dade Middle School sheltered 2,500 evacuees. The first night, they dined on pizza and chicken—the regularly scheduled student lunch.

"This community was hard hit during Hurricane Andrew 25 years ago, and I know that upped the anxiety for this storm," Galardi said. "I didn't want people to be in a scenario where they were in a house or a mobile home that was unsafe."

#### A thank you for those who bring light

As many as 10 million Floridians suffered the consequences of lost electrical power and an inability to run AC during 90-plus-degree temperatures in the aftermath of Hurricane Irma. Frustrated and uncomfortable, many cursed the darkness. But the temporary hardship led Naomi Valle '02 to an enlightening experience.

A post directed her to the Facebook group "Irma Recovery: Florida Linemen Support," and she began learning about the work of the roughly 30,000-strong army of electrical contractors arriving from as far away as California, Wisconsin and New Hampshire to get the lights and fans running again.

As she connected with workers' families online and spoke with individual crew members in the South Florida streets, she found that daily conditions for the outof-towners were not much better—and sometimes worse—than for locals. Shifts lasted 16 hours in the blazing sun. Companyprovided meals were meager. Laundry was piling up. For many, nights were spent on cots or in trucks. Plus, some workers had come straight from weeks-long stints in Texas after Hurricane Harvey, with a number of them missing personal events such as a planned honeymoon and even a son's wedding.

Valle wanted to honor the workers' sacrifices and the risks they took as part of their jobs, so the stay-at-home mom and former teacher used social media to called upon more than two dozen fellow Panthers as well as family, friends and even high school classmates she hadn't spoken with in 20 years. Strangers and former students also contributed to the cause as did local businesses.

"My phone buzzed non-stop, from early mornings to late nights, with requests and updates," she says. "Laundry service needed for an eight-man crew in North Miami. Boot dryers for a lineman with aching blisters. An Italian dinner for a crew of 25 in Brickell." Valle also arranged for birthday surprises—tipped off by workers' loved ones—as well as handmade "thank you" cards from local schoolchildren that were delivered with home-cooked meals.

"You've given us a completely different outlook on this world," one grateful lineman told Valle, who was motivated by memories of the kindness shown her own family after Hurricane Andrew took everything they owned in 1992. "I can tell you now, after 25 years, that the feeling of immense appreciation lasts a lifetime."

#### Hitting the road

Students Anthony Baez and Milhtian "Milci" Cerda each drove to Immokalee, Fla., to represent their Greek organizations at a charity drive in support of Hurricane Irma victims.

Located about 30 miles northeast of Naples in Collier County, where Irma had made landfall, the migrant farming community of Immokalee was hit hard. In the aftermath, many residents were forced to move as crews condemned more than 50 mobile homes destroyed by the storm.

Cerda, president of FIU's chapter of Lambda Theta Alpha Latin Sorority, and Baez, president of FIU's chapter of La Unidad Latina Lambda Upsilon Lambda Fraternity, joined dozens of volunteers from across the state to sort food and clothing at a donation center. They also provided guidance to those completing applications for FEMA assistance.

"I moved here from Dominican Republic and grew up in a poor neighborhood, so I know firsthand how complicated it is not to have anything and not have anyone there to help you," Baez said. "Whenever I can do something that can impact someone's life, I want to do it."

Cerda added: "It was well worth it. We saw how many people were panicked and scared leading up to the hurricane and knowing that we were OK, we just wanted to do our part."

#### **Redirecting efforts**

Soon after Hurricane Harvey decimated Houston, Camila Martinez, a sophomore nutrition and dietetics major, prepared for a week-long mission trip to help rebuild ruined homes.

But then Hurricane Irma put an end to the plans.

Her flight and trip canceled, Martinez turned her attention to those impacted by a storm much closer to home. With FIU classes interrupted due to Hurricane Irma, she used the time off to volunteer as a caseworker with the American Red Cross at the Tamiami Park shelter, just a short walk from FIU. She worked 12-hour shifts, conducting interviews with dozens of evacuees, many from Monroe County, to help assess their immediate needs.

"My goal is to be a doctor one day and to take what I've learned and find out how to make my community better," Martinez said. "Many of the evacuees were worried about their homes, their jobs and wondering if they were going to have to leave and start over. I wanted to try and help, even if I was just one person."

But she wasn't just one person. Martinez was one of many students who sprang into action in the wake of the storm, many through their campus organizations such as the Caribbean Students Association, which collected donations, the Miami Medical Team of FIU, which filled more than 60 boxes with nonperishable food and medical supplies, and the Panther Motorsports automotive engineering club, which participated in a local "Cars & Coffee" hurricane relief event.

# LENDING A HAND TO STUDENTS FROM **PUERTO RICO**

Displaced young people adjust to life at FIU

By Jennifer Lacayo '15 Photo by Eduardo Merille '97, MBA '00

Il Sarah Colón wanted was to start her junior year at the University of Puerto Rico Río Piedras campus. A month of protests earlier in the year paralyzed the institution and delayed the start of the fall semester. The day the university reopened she learned it was closing for the rest of the week as Hurricane Irma moved

"We were all scared," says Colón, a chemistry major who wants to become a pharmacist. "We heard the hurricane had become a Category 5."

dangerously close.

The campus was closed for two weeks. Classes started again—but only for two days. Hurricane Maria was rapidly intensifying into a Category 5, and the eye of the storm was projected to pass straight over Puerto Rico.

"All I could do was look at my family and hope we would be okay," Colón says. "We saw whole wooden houses and trees around us ripped out of the ground. Water got into our house and damaged everything. We were left



FIU students from Puerto Rico Mariela Serrano (left) and Sarah Colón

without water and electricity."

One of the 10 most intense Atlantic hurricanes on record, Hurricane Maria devastated the U.S. territory.

Five days later, Colón was on a plane bound for Miami, one of the first students from Puerto Rico and other hurricane-battered Caribbean islands to resume their education at FIU. She started ENC 1101: Writing and Rhetoric on Oct. 16, the beginning of an eight-week mini session that was available to all FIU students.

"I really didn't anticipate being able to continue my education so fast," Colón says. "I also didn't anticipate receiving a scholarship."

Colón has been helped thanks to a \$350,000 grant from the John S. and James L. Knight Foundation to support Puerto Rican students affected by Hurricane Maria. The grant is funding living expenses, tuition and other costs associated with relocation. In addition, the funds may support future efforts FIU might undertake in Puerto Rico to assist universities that suffered storm damage. More than 900 students from islands devastated by hurricanes Irma and Maria have applied to be visiting students at FIU under the #FIUstrong initiative, which offers them an out-of-state tuition waiver through the spring of 2018.

Many of these students arrived in South Florida with limited resources and were in need of housing and other essentials. Colón, who is living with three other students at Lakeview North, brought two pairs of pants, 10 tops and four pairs of shoes to begin her new life in South Florida. To help meet these students' needs, the FIU Foundation established the Disaster Response and Recovery Fund. One hundred percent of the money raised through the fund has gone to help those impacted.

Colón has been surprised by the size of the Modesto A. Maidique Campus and the diversity of its students. She loves her new life so much that she hopes to graduate from FIU. Says Colón, "I'm so grateful."

# Unsung HEROES By Alyse Mier '16

Photos by Carl-Frederick Francois '16

he phrase "it takes a village" describes perfectly how people and communities banded together to pick up the pieces after the biggest storm ever recorded in the Atlantic barreled through South Florida. Flood waters crept into homes, felled trees blocked roads, power remained out for days. But in the aftermath, a positive stands out: an outpouring of people helping people. Complete strangers gave of themselves to lend a hand in rebuilding. These are just a few of the many at FIU who went above and beyond in a time of need.

#### **RAY CASTRO**

When optician Raymond Castro '97 arrived at MMC after the storm to assess damage to the campus optical shop in which he works, he got an eye-opener. The place was fine, but in the same building a special-needs shelter had been set up that housed evacuees with medical conditions.

"I saw a lot of people with their glasses sitting crooked on their faces, so I just started walking up to them and saying, 'Can I fix your glasses?' Before you know it, word of mouth started to spread," Castro said.

Rummaging through his drawers, he found what he needed to fix broken bridges and temples, reposition frames on faces and clean lenses.

"It's the little things you can do," he said, "that you don't realize make such a big impact on people."





Continued

#### **ELENA CABRERA**

Elena Cabrera says she wouldn't trade her experience assisting on campus during the hurricane for anything in the world. "I am a more humble, social, better person because of it," said the custodial worker.

Cabrera worked 12-hour shifts at the Ocean Bank Convocation Center cleaning bathrooms and collecting garbage as Monroe County evacuees hunkered down for the storm.

With her adult children and a grandchild safely out of harm's way, "I wasn't going to stay home alone," Cabrera said, "so I told my supervisor, 'I can work whenever you need me.'"

Talking with evacuees and helping FIU and Red Cross volunteers with small tasks made her feel part of a team in a way that her regular job often does not. The good memories during what was a difficult time for everyone came from collaborating with others, and the feeling of contributing touched her deeply.

"It was incredible," she said. "It's like nothing I've ever done before."





#### **GRETCHEN GARATE**

Gretchen Garate could not stomach the thought of her colleagues in the FIU Police Department going without food during the storm. So she made sure that sandwiches—and lots of them—filled her area's two refrigerators, and that chips, bananas, bottled water and Gatorade were at the ready round-the-clock for officers on duty.

"Being able to do something like making sure everyone was fed and seeing how appreciative they were of it was nice," the communications officer said, "but to me it's just that little extra step that you should take."

When Garate wasn't squirreling away snacks for her buddies, she was taking on a leadership role within the department. She kept the dispatch team organized by ensuring everyone had up-to-date information to share with callers, and she often stayed overtime to cover for those running late to work in the post-hurricane traffic slowdown.

In the end, though, keeping up spirits—as well as blood-sugar levels—might have been her biggest contribution to those who so willingly gave of themselves during a time of need.



#### **TRAVIS STOKES, BRENDA DOME AND LISSY PEDRAZA**

FIU's Parking and Transportation team of Travis Stokes, Brenda Dome and Lissy Pedraza—pressed into service in the campus shelter that housed Monroe County evacuees—acted quickly when they heard that a four-day-old baby was among their charges. Without hesitating, the three pooled their money for an emergency run to the nearest Target. With power out, Pedraza relied on the light of her cell phone to fill a basket with onesies, diapers and blankets as well as toys for an accompanying four-year-old big brother.

Going even further, at least in terms of distance, Dome hopped in her car after the storm and drove nearly 40 miles to Pompano Beach to purchase hundreds of towels from a commercial supplier. These were distributed to evacuees eagerly looking for their first shower in several days.

"Seeing the joy on their faces," Stokes said, "was like hitting the Powerball at \$758 million."

#### **CARLOS BERRIZ**

Nothing could keep Carlos Berriz from going to work. The fleet manager prepared to jump into his car even before Irma had completely left town, but a tree had fallen on his vehicle and cracked the windshield. Without hesitation, Berriz grabbed a chainsaw, freed his ride and tended to the work of the university.

"It's what we do," Berriz said of the can-do spirit he and his team showed throughout the days before and after the storm.

Berriz played an essential role during the university's disaster planning-and-response efforts. He and his crew ensured that the university's 500 vehicles—cars, vans, trucks, golf carts and more were gassed up and secured in safe locations to ensure their availability immediately after the storm. Equally important, as fuel shortages befell the state, he came to campus, often at odd hours, to meet the vendor charged with keeping FIU supplied with both regular and diesel fuel. The resource, distributed at a gas pump at Modesto A. Maidique Campus, kept campus generators operational following the storm to continue powering the vehicles used to transport those staying in campus shelters and to haul away debris. ■

# Richard Olson weighs in on planning and response for Hurricane Irma



Richard Olson researches the political fallout from natural disasters and has been involved in more than 20 field responses and post-disaster investigations. He is director of FIU's Extreme Events Institute and International Hurricane Research Center and a professor of politics and international relations. His research has been funded by the U.S. Agency for International Development and the National Science Foundation.



#### FIU Magazine: As we, in Florida, continue to recover from Hurricane Irma, what are your impressions?

It could have been much, much worse. If the storm had held to the original forecasts for a Florida "east coast" storm at Cat 4 or above, we would have experienced a statelevel catastrophe. The insured and uninsured losses would have been much greater. Overall, I believe that the emergency management system worked pretty well.

People appear to have complied at very high rates with local evacuation orders, and record numbers took shelter by leaving the state. The question is, what did "evacuation" mean when ordered by governments?

I think the language got a little loose as the storm approached. Official orders were to evacuate zones A and B along most of the Florida coast. People then had a choice: Do they go inland to friends, to shelters, to hotels? Others heard "evacuate" and looked at the size of the storm and decided to leave the state. We don't know if people understood that they only had to get out of zones A and B. It's an interesting question how the word evacuate is interpreted by people in various zones.

#### And the government didn't specify how or what to do?

It's hard for government to specify how to evacuate when you're dealing with hundreds of thousands of people. You don't particularly want government trying to tell people exactly where to go except at the very last minute. People have to decide what their comfort zone is, whether that is staying with family in nearby Kendall or driving to Georgia.

Much more work needs to be done on planning and evacuating senior and specialneeds populations, particularly in areas where they are most vulnerable and, frankly, poorer.

You have talked about a "Harvey Effect," that Hurricane Harvey's battering of Houston not long before Irma's arrival in Florida impacted our high evacuation rates.



"Whether future events qualify as disasters or catastrophes, or just as emergencies," says Richard Olson, director of the Extreme Events Institute, "will depend on what we do or, more problematically, don't do."



That earlier disaster was highly covered by the media and on social media. The bottom line is that we don't know yet empirically if people who were particularly affected by the coverage of Harvey were more likely to evacuate to an out-of-state location, or if, at the very least, compliance rates were higher in our coastal zones than would have been the case without the very fresh and vivid visual lessons of Harvey. It'll be interesting to see, once the evaluations are done, what compliance rates were, but I suspect they were higher than we've usually seen in the past.

We marked the 25th anniversary of Hurricane Andrew just as Harvey began battering Houston and a week before we started preparing for Irma. What are the greatest legacies of Andrew in terms of lessons learned?

South Florida took Andrew in the teeth. And so you always expect jurisdictions that took the most damage to be the most reactive in terms of improving standards. South Florida learned a hell of a lesson with Andrew about codes and code enforcement. The South Florida building code developed from 1994 on is the major and principal outcome of Andrew, and it has two components: the code stringency itself and the actual enforcement of the code. Those are two different things and they have to go together, which Andrew revealed. If you have a weak code that is poorly enforced, you get massive damage.

So the question for the state is, does it want to toughen up the land use and building code standards, and a good place to start is the South Florida building code.

#### You had said that post-evacuation planning was lacking following Irma. What would you ideally like to see?

Return planning must equal evacuation planning. Public officials and emergency management people must be as vocal and consistent in their messaging after as they were before impact. There's a tendency and I get it—for officials and political leaders to let down when they've got so much to handle. But people need information about how to phase back and to what they are returning. These issues need to be planned and messaged just as clearly as the evacuation was.

# Q ∎ to add?

I still am concerned about poorer people and how they're going to recover. In this case, a lot more people in the middle- and upper-income groups might have ridden out the storm out of state. The poor are kind of stuck sheltering in place or going to a shelter or staying with family members or friends that are only marginally safer. This is a fundamental socioeconomic and moral and political issue. I'm not sure we can do anything about that, but it has to be part of a public discourse. We can't pretend that this isn't going to be an issue with every disaster. It always is.



# Caring for disaster victims' mentalwellbeing:

# A first responder's story

Mark J. Macgowan is the associate dean of academic affairs for the Robert Stempel College of Public Health and Social Work and a professor of social work. A licensed clinical social worker, he serves on one of Florida's Disaster Medical Assistance Teams and has also worked as a disaster mental health worker with the American Red Cross.

The emergency notification app goes off on my phone, then a text comes in and, finally, someone calls me with the news: My disaster response team is to deploy within 24 hours to help in the aftermath of Hurricane Harvey. I have to get ready.

In my day job, I am a professor of social work and associate dean of academic affairs for the Robert Stempel College of Public Health and Social Work. But when disasters strike, I transform into a behavioral health specialist on a medical response team that includes physicians, nurses and paramedics also ready to leave on short notice. I travel with a backpack outfitted with essential supplies and nonperishable food to carry me for up to 48 hours on my own and a bigger bag to keep me going for the remainder of the two-week deployment.

Our team's duties are to help out in all aspects of a rapid deployment, including setting up a base of operations. We are trained to potentially deploy into austere environments; we may sleep in the open air, aircraft hangars or in hotels. In Houston, we were stationed beside one of the large convention centers that sheltered evacuees from floods.

Attending to people's behavioral and mental health is an essential part of disaster response and recovery. Evacuees frequently seek medical care and tangible services such as financial assistance, but they also often have psychosocial needs as a result of the disaster or exacerbated by the event. There is a general consensus that mental health should be integrated into disaster response as most people will experience some level of distress. Although the majority of those affected do not have severe symptoms, post-traumatic stress disorder and major depression can appear in up to a third of "highly exposed" survivors.

During our short deployments, we do what we can to address the range of emotional responses even as the full range of symptoms may not yet be evident. We typically use brief interventions such as psychological first aid, an approach that is built on the concept of human resilience. For example, on one deployment, a person seeking financial assistance sat crying quietly. While she waited, I sat down beside her, offered her a tissue and a bottle of water. I said nothing until she was ready to talk. She opened up about losing precious old family photographs in the storm. She spoke about being nervous to go to sleep as the storm had happened at night. Having someone available to talk about how she felt and what she could do next to get her life back in order was important. 13. E 12

In another case, on a community visit, I met with a single mother of four children who was living in a trailer partially destroyed by a hurricane. She had pre-existing and aggravating stressors, including a recent car crash. Now, after the storm, her home had no air conditioning, and many of her family's belongings were ruined. As I met with her away from the kids, she broke down and cried and said that she needed to "be strong" in front of them. Beyond providing emotional support, we connected her with a local store that donated gifts cards so she could secure new bedding, clothing and children's toys.

In addition to working with those directly affected by disaster, I care for the mental well-being of responders. The stress of a deployment can take a toll as those charged with helping are themselves cut off from their own support systems. Sometimes responders handle this through humor at the expense of others, as was the case with one who had a pattern of making fun of teammates. While humor can serve to diffuse stress, in this instance it came at the expense of others. I spoke privately with the man about the habit, which had caused some friction among his colleagues. He responded well and was more mindful of his actions. Sometimes responders become angry or frustrated. In such cases, the answer may be to accompany the individual on a walk away from the center of operations to talk things out. I will also check in with that person periodically throughout the deployment to help him or her avoid compassion fatigue, or burnout.

How do I keep my own balance during a deployment? Calling or texting home as often as time and cell service permit is one way. Talking with my teammates about family and activities outside of the deployment also helps as does making personal space away from the center of operations to read or listen to music. And having a second mental health responder on the team allows me to discuss with him or her any built-up emotions associated with, for example, witnessing medical trauma or empathizing with evacuees who have faced major losses. For first responders, access to psychosocial caregivers plays a critical role in promoting compassion satisfaction, the pleasure derived from helping others. An ability to find such fulfillment keeps disaster personnel going back in times of need, myself included.

It wasn't long after returning home from Texas that my emergency notification went off again: on standby to help after Hurricane Maria. It's been a busy fall!

Carolyn Cole removes her belongings from her home that was flooded by Hurricane Irma on Sept. 12, 2017, in Bonita Springs, Florida.



# In Gratitude

#### Hats off to those who support FIU in crisis and year round

By Charles Crespo MA'13, University Advancement

"Unprecedented destruction." These two words have been spoken frequently by government officials, aide workers and news anchors during the past couple of months. Between hurricanes Harvey, Irma and Maria, as well as the earthquake in Mexico and wildfires on the Pacific Coast, natural disasters have created great need for aid in the United States and abroad.

When called upon by its community and state government to respond, FIU did not hesitate to step in and step up. As Miami's anchor institution, the university is rooted in the South Florida community by its mission; it is committed not only to educating the population but also to improving the longterm well-being of those who reside across the region, the country and the globe. For these reasons, it was natural that FIU would support those affected by these disasters in any way it could.

And "any way" is no exaggeration. The FIU family has given freely not just through monetary donations but also through time and talent.

Case in point: Members of the FIU-FAST team—an all-volunteer group of medical professionals—worked 12-hour shifts to

support West Kendall Baptist Hospital and Jackson South Community Hospital. Seven employees returned to campus early and established a call center to answer questions from both the FIU and South Florida communities. Alumni led donation drives to help those impacted by hurricanes Irma and Maria. The university housed hundreds of evacuees, including those with special needs, from Monroe County and the Caribbean. President Mark B. Rosenberg and university leadership waived out-ofstate tuition fees for students from Puerto Rico and the U.S. Virgin Islands. The FIU Foundation created a disaster response and recovery fund to give direct assistance to those affected by the storm. And FIU social work students and music students used their talents to listen to and perform for evacuees, respectively.

Of course, not all giving occurs after a crisis; much of it comes before. For the FIU family, that is no different. A big part of why FIU is successful in disaster response is because it is proactive—actively researching ways to either prevent or mitigate the destruction a natural disaster can cause and, of course, to guide the best response. Through research led by its faculty, the university works actively every day to predict and prepare for the next natural disaster, for the next public health crisis and for the next extreme weather event.

What does this research look like? It looks like the Bridge Engineering Program, which tackles challenging infrastructure problems. It looks like the Extreme Events Institute, which conducts multi-disciplinary research on hazards and vulnerabilities of all types, with emphasis on the role of pre-impact "risk drivers." It looks like the Institute of Water and Environment, which addresses challenges posed by rising seas.

Thanks to the tireless work of these researchers, the South Florida community and those like it around the world will be better prepared when the next extreme weather event heads this way.

In these times of turmoil, we have witnessed the true reflection of our FIU. It has been incredible to see the power of our FIU community. No matter how or when you gave, we say thank you.

We can't step in and step up without you. We are forever grateful for all that you have done. ■



### VIP: Very Important Panther

#### Adriana Pereira-Reyes '05

Senior Director of Community Relations, Walmart

# Q: When FIU requested bed sheets to cover cots in a campus special-needs shelter for Monroe County hurricane evacuees, you and Walmart came through. Why?

**A:** At Walmart, we work every day to offer meaningful support to the communities we serve. Helping my alma mater was not only an opportunity for my company but also for me on a personal level. I did not hesitate to do a small part for an institution that has done so much for me and our community. Partnerships like this speak to the amazing things that can happen when people come together and focus on the greater good.

## **Q**: Did you have any FIU experiences that drove home the value of a community-oriented approach to living?

**A:** Days after graduation, I started an internship at what is now FIU in DC. I left the familiarity and comfort of home in Miami and took a blind leap of faith in Washington, in the middle of winter. I thought I would have to navigate a new life alone but I quickly realized I was in very good company. I found myself surrounded by an amazing and talented group of FIU alumni who did not hesitate to lend a hand. For me, that experience defined community. We had FIU in common and that was enough to build camaraderie, a support system and friendships.

## Q: Is there someone in particular who encouraged you to work on behalf of others?

**A:** My father recently passed away and at his funeral I delivered a eulogy centered on selflessness. It is the best lesson my father taught me. His life's work was driven by a passion to help people, especially those less fortunate. I strive every day to personify his legacy by putting others first.

#### Q: Your degree in mass communication led you, eventually, to the directorship of FIU's Governmental Relations and, today, a position as spokesperson for Walmart. Which lessons best prepared you for this work?

**A:** Much of my success, both personal and professional, I owe to FIU. Every step I've taken and every corner I've turned can trace back to FIU, but it was actually the lessons outside of the classroom that best prepared me for the real world. The internship opportunities, the campus involvement, and the interactions with administrators, faculty, staff and alumni all shaped who I am today. At FIU, I was constantly reminded that my true self is the best one, dreams are limitless and challenges are meant to be overcome.

## **Q**: You are mom to 1-year-old Matthew. What will you teach him about finding satisfaction and happiness?

**A:** My mother always taught me that an education and knowledge are two things that can never be taken from you. I want my son to appreciate that and spend his life learning. I also want him to be prepared for life's curveballs. You can plan all you want, but always be ready for the surprises, and embrace them!



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