

## **More than a Thousand Civil Engineering Students Displayed Their Skills Over the Weekend by Building Steel Bridges and Racing Concrete Canoes.**

*Students throughout the Southeastern United States and Puerto Rico met on the University of South Florida Tampa campus as the USF Civil and Environmental Engineering Dept. hosted the annual American Society of Civil Engineers Student Conference.*

**By Janet Gillis, College of Engineering**

Students and faculty from 30 universities from the Southeastern United States and Puerto Rico competed this past weekend (March 27-29) in the annual American Society of Civil Engineers (ASCE) 2014 Southeast Student Conference. They built steel bridges in the Sun Dome and raced concrete canoes on the Tampa Bypass Canal. It's always very challenging and a tremendous amount of fun.

"Activities like this open the students' eyes to research as undergraduates, said Associate Professor Abba Zayed, faculty advisor to the USF ASCE student organization. "It shows them the importance of knowledge. If their entry in a competition is not working they must do research and find why it is not working and fix it."

The steel bridge competition was held all day Friday in the Sun Dome Corral. Student teams create steel bridges from conception and design through fabrication, erection and testing. The competition requires the structures to withstand 1,200 pounds of pressure.

"The competitions are a mixture of applying classroom learning and solving problems within a team," said Justin Bowen, '12 BSCE and '13 MSCE, conference chair. "As the teams encounter problems in their designs they will have to draw on teamwork to overcome them. There are no textbooks. It really brings out those leadership qualities."



**Students from Polytechnic University of Puerto Rico speak with the judges as they measure the structure deflection as pressure is exerted on their entry.**

Because the cost of loading equipment on a plane is very high, Jose Colon a student at the Polytechnic University of Puerto Rico said they ship their canoe and heavy equipment by cargo ship. "It requires

planning well in advance, a lot of logistics, he said.” This is a good example of a real life engineering challenge outside of the competition.

Why build a concrete canoe? Think about how pervasive concrete is in our everyday lives – sidewalks, buildings, the bridges, roads. It’s vital to the infrastructure of our society. These future engineers demonstrated their expertise by designing, building and racing a concrete canoe on the Tampa Bypass Canal.

Rebekah Nichols a sophomore civil engineering student from Tennessee Tech was attending her first conference. Tennessee Tech brought 30 students and two faculty members. “I don’t know what to expect, so I’m just taking it all in,” she said. Rebekah is one of several persons who paddled the canoe on Saturday in various contests such as men’s and women’s endurance and sprints, as well as coed races.

USF’s canoe – named “FestiBull” - is a sure winner, according to team captain and senior Franki Vallejo. On Friday night all the canoe entries are placed in a tank of water and pushed below the surface. If the canoe sinks, it’s disqualified. If it rises to the top, it will compete in the Saturday race at Tampa’s Bypass Canal.

Franki explained, “It’s a safety precaution as well as an environmental one. We don’t want any canoes left on the bottom of the canal.”



**USF FestiBull Team: Brett Schlessing, Gabrielle Vella, Anna Quinones, Erin Morrison in front. Alexis Biondi, Franki Vallejo, Victor Retana in back.**

The canoe competition consists of three parts for the win – canoe construction, presentation and the races. Teams must place high in all three to even have a chance to win.



**Vanderbilt University paddlers compete in the women's sprint event.**

With canoes named Accelgator (UF's entry), Concrete Jungle (Miami's entry) and KryptoKnight (UCF's entry) the conference is as much about friendly competition as it is about putting engineering knowledge learned in the classroom into actual use.

One day these future engineers will build the roads and bridges we will travel on, the buildings we live in, the pavements we walk on. That's a heavy responsibility, and that's exactly why competitions such as this one are so important to an engineering student's education. It provides a unique hands-on experience that is impossible to get in the classroom.

[For more information on the conference, click here.](#)

[For photos of the event, click here.](#)