WOW Challenge Overview
Updated: 4-18-13

Project Purpose:
The purpose of this contest is to illustrate hurricane mitigation techniques that will safeguard people, reduce property loss, reduce insurance costs, and promote a "culture of preparedness" for natural disasters. Student projects will focus on the mitigation of hurricane damage to buildings that will safeguard people.

Project Description:

- Teams of high school students will research, identify, illustrate, design, construct, demonstrate, test and communicate a hurricane wind mitigation problem and solution; each high school will be allowed to enter one team; it is up to each teacher from each school to determine how many students will participate as a Team for this competition; however, on the day of the Challenge competition, only 4 students from the Team will be allowed to compete; less than 4 can compete, but not more; all other teammates, teachers and family will be welcomed to attend the Challenge and watch the competition.

- Students will prepare three components for the competition to address the hurricane wind mitigation problem and solution: a physical test, an oral presentation and a written technical paper.

- Hurricane wind mitigation solutions should be realistic, aesthetic, marketable, practical and perform well; students should consider why would an investor or company care about the mitigation solution and be interested in investing in it?

- The objective for the 2013 Wall of Wind Mitigation Challenge is for students to design a way to reduce the impact of wind scouring on a building’s flat roof. Each team’s task is to develop a mitigation solution that will improve the building’s aerodynamic performance in order to prevent gravel on the roof from being blown away by hurricane-force winds. The models will actually be tested by the real 12-Fan Wall of Wind in a controlled wind field to evaluate the effectiveness of the solution.

- An informational workshop on this year’s competition for teachers and students was recorded and the video is available in the video section on the WOW Challenge web page. The technical details will be described in the 2013 Physical Guidelines document and found on the WOW Challenge web page.
• Oral presentations should effectively communicate some scientific process and analysis involved with the development of the hurricane wind mitigation solution; oral presentations should also consider the benefits and values of the mitigation solution, similar to a new business presentation to potential investors. The oral presentation details will be described in the 2013 Oral Guidelines document and found on the WOW Challenge web page.

• Oral presentations and physical tests will be conducted at the FIU Engineering & Computing Center on Wednesday, May 22nd.

• Dress Code: Teams should consider wearing appropriate professional business attire for the day of competition, especially for their oral presentations.

• Written papers should include any scientific or mathematical analysis involved with the development of the hurricane wind mitigation solution and describe how hurricane wind mitigation is being addressed with their solution. The written paper details will be described in the 2013 Paper Guidelines document and found on the WOW Challenge web page.

• Written papers are due electronically as a PDF document by Monday, May 20th at 12:00pm. Please e-mail your written paper to Erik Salna at esalna@fiu.edu.

• The 3 components of the competition will be judged and scored by a panel of experts.

• Special prizes and awards will be presented to student Teams.

Judging:
• A panel of experts will judge each written technical paper, oral presentation and physical test.
• The physical test will be judged on performance and on being realistic, aesthetic, marketable, and practical.

Qualification:
• Judges will verify that each mitigation solution is within the official physical guidelines before being tested.

Scoring:
• Judges will use a cumulative scoring point scale for the written technical paper, oral presentation and physical test.

Information:
• WOW Challenge information will be periodically updated at: http://www.ihrc.fiu.edu/outreach-education/wall-of-wind-challenge-2013/

Contact Person:
• Direct all questions and comments to Erik Salna at esalna@fiu.edu or 305-348-1146.