

Bridges Crash, Towers Crumble, and Boats Race at Hawaii Physics Olympics

By Maxyne Salvador, University of Hawaii at Manoa

On Saturday, March 13, the University of Hawaii at Manoa (UHM), along with Kapiolani Community College and Brigham Young University at Hawaii (BYUH), hosted the 21st annual Hawaii Physics Olympics on the Manoa campus. Thirty teams, each composed of four to six students from high schools all over Oahu, competed in a series of five 30-minute events that tested their knowledge and application of basic physics principles.

One event was a balloon-propelled boat race, hosted by the UHM Society of Physics Students chapter, where teams received a manila folder, tape, rubber bands, straws, aluminum foil, and paper clips. Using these materials, teams built boats that could be propelled only by a balloon, with the aim of traveling the greatest distance while supporting a load. With a dimensional restriction of 8.5" wide by 11" long and no height limitations, their boat profiles mimicked objects ranging from speed boats to air blimps!

Another event created by BYUH was the Modified Egg Stamper. The objective was to retrieve a piece of tape (sticky side out) from the top of an egg using weights attached to a vertical slinky. Students had

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to decide how much weight to put on the end of the slinky to make it drop just the right amount to retrieve the piece of tape on the top of the egg, without breaking the egg! After successfully removing the tape from the egg, the drop height was increased. Other events included building an index card tower, building a bridge out of newspaper and popsicle sticks, and a car jousting contest.

"The Physics Olympics was started so that students could have some fun with events that involved some applications of physics concepts," said Dr. Michael Jones, a physics professor at UHM. "Initially the high school teachers designed the events and UH provided the site and people to judge. We've since evolved to having undergraduate students design, run, and judge the events."

The Physics Olympics lets high school students know that the world of physics is awesome and fun. "At our boat race, students were yelling and cheering on their boats as if it were a football game!" said volunteer Emily Gomes. Students were really excited to see their designs and testing methods working.

The Physics Olympics is a great way for high school students to apply the physics concepts that they have learned in the classroom. Although not all students walk away with blue ribbons at the end of the day, it is a pleasure to see them enjoying the events and having fun with their friends.

To view additional photos from the Physics Olympics, please visit www.phys.hawaii.edu and follow the *News and Events* link.



Students test their boats during the balloon boat race.



Students prepare for the egg stamping competition.