

Student at the helm, USU pulls off 2012 Physics Day at Lagoon

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LOGAN - When he attended Utah State University's Physics Day at Lagoon in 2004, Alta High School student Milo Maughan gave little thought to the logistics of carrying out such an event. The Draper, Utah native was delighted to enjoy a day off from school at the state's celebrated amusement park, hanging with friends as they dared each other to jump on the latest thrill rides.

Now a USU graduate student, Maughan was tapped by his faculty mentors to lead this year's annual event on Friday, May 18. The aspiring physics teacher checked – and double-checked – details for Physics Day 2012, when more than 5,000 teens and nearly 500 teachers from Utah, Idaho, Wyoming and Nevada transformed Davis County's über playground into a giant laboratory to explore such basic physics concepts as gravity, projectile motion, centrifugal force and energy.

"I never dreamed I'd one day be coordinating this event and communicating with science teachers throughout the Intermountain West," says Maughan, who earned a bachelor's degree in physics from Utah State in 2011 and is currently enrolled in USU's recently implemented Secondary Education Science Graduate Route to Licensure Master of Education program.

"Physics Day is a great opportunity for students to practice what they've learned in the classroom," he says. "It's hands-on, it's exciting and it's fun."

USU Physics Day is one of Utah State's largest and longest-running outreach and recruitment events. Since its inception in 1990, more than 120,000 teens have participated in the yearly gathering, which offers the kind of atmosphere Maughan would like to incorporate into his future classroom.

"The entire USU physics department – faculty, staff and students – turns out, along with our industry partners, to welcome participants and pitch in with running the event," he says. "Along with all of these volunteers, I love interacting with students and helping them learn new things."

At this year's day-long event, participants pursued such perennially popular activities as bombing a giant bull's eye with raw eggs in self-designed protective containers from the Sky Ride. (Nearly 900 eggs plunged to their doom at last year's competition.)

Students also displayed ideas for thrilling rides of the future, vied in a robotics grudge match and measured G-forces as they zoomed through roller coaster loops. For the third consecutive year, middle and high school teams competed in an engineering challenge to design and build energy-generating windmills with a chance to advance to the national MESA USA Wind Energy Challenge.

Along with the day's amusements, nearly 100 students in three-person teams engaged in the Physics Bowl competition for more than \$120,000 in scholarship awards. Six students in the top two teams received full, four-year scholarships to USU, along with two semesters of free textbooks.

Through Physics Bowl competitions, USU's Department of Physics has recruited some of its top students.

"Three of our 2012 graduates, all outstanding students, entered our program because of scholarships they received as high school students in our Physics Bowl competition," says Jan Sojka, professor and Physics Department head.

One of these, Brian Tracy, was named a Goldwater Scholar in 2011. An enthusiastic Physics Day volunteer during his undergraduate career, Tracy returned to help Maughan, his former classmate, with yet another year of amusement park fun.

"My assignment is to help with the *Colossus' Colossal G-Forces Contest*," Tracy says. "In all, Physics Day is a fun experience, where you can be nerdy and appreciated for it."

2012 Physics Day sponsors include Idaho National Laboratory, ATK Launch Systems, Boeing, Eastern Idaho Regional Medical Center, Hill Air Force Base, Lagoon, Micron, Portage Environment, Pasco Scientific, Rocky Mountain NASA Space Grant Consortium, Space Dynamics Laboratory, U.S. Navy, the USU Bookstore, USU College of Science, USU Emma Eccles Jones College of Education & Human Resources and the USU Admissions Office.