

- **Record turnout for the Turkey Trot**
- **Real life robots make a big impression on high school students**

### **Record turnout for the Turkey Trot**

A total of 171 runners and walkers turned out for the 2013 Turkey Trot, a 5K run/1-mile walk that was held in the Livermore Valley Open Campus on Nov. 20. This year's turnout, which included 51 participants from Lawrence Livermore National Laboratory (LLNL), was nearly triple the turnout for last year's event.

The top five male finishers were Ivan Antonov (8353), Guilhem Lacaze (8351), Anthony Ruiz (8351), Francois Leonard (8656), and David Siegel (8656). In the women's division, Lisa Andersen (8226) crossed the finish line first, followed by Marie Kane (8223), Marianne Paulson (LLNL), Maria Smith (8511), and Julie Fruetel (8114).

With a 25% participation rate, Center 8900, Computer Sciences & Information Systems, won the inaugural Gobbler's Cup, a new award to honor the Center with the highest percent participation in the Turkey Trot. Center 8900 will retain the Gobbler's Cup until the 2014 Turkey Trot.

The 2013 Turkey Trot also included an event fair with information booths featuring site diversity groups and outreach activities. Mark Brynildson (8517) and Lauren Beghini (8259) each won a \$25 gift certificate from Forward Motion Sports, which also hosted a booth at the event.

There will be more run/walk events coming in 2014: March Madness on March 12; the Veggie Run on May 27; the Red, White, & Blue Run on July 2; and the return of the Turkey Trot on Nov. 19.

Walkers and runners, if you would like to increase your aerobic fitness and speed, join the weekly interval training group. The group meets at 11:30 a.m. every Thursday, starting on Jan. 9, in front of the Health Services building (B925). To help participants track their progress, a timed Monthly Mile event is held on the third Thursday of each month (except for in January, when the Monthly Mile will take place on Jan. 23). Contact Preventative Health Coordinator Joy MacPherson (8527) for more information.

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## Real life robots make a big impression on high school students

When Maynard Holliday (8118) sees Iron Man on the big screen, he thinks of the great mechanical engineering design that went into what he calls “the ultimate exo-skeleton.” He recently shared this unusual perspective on summer blockbusters with a Dublin High School engineering class.

Maynard showed the students real-life examples of robots in action, like Boston Dynamics’ PETMAN ([http://www.bostondynamics.com/robot\\_petman.html](http://www.bostondynamics.com/robot_petman.html)), an anthropomorphic robot designed for testing chemical protection clothing; SnakeBot (<http://biorobotics.ri.cmu.edu/projects/modsnake/>), a modular snake robot created by Carnegie Mellon University’s Biorobotics Lab; and the iRobot PackBot, or LEXI [[https://www.llnl.gov/news/aroundthelab/2012/Nov/ATL-110812\\_lexi.html](https://www.llnl.gov/news/aroundthelab/2012/Nov/ATL-110812_lexi.html)] , which stands for Livermore Explosives iRobot and was designed by LLNL engineers.

The students’ favorite real-life robot was Boston Dynamics’ high-flying SandFlea ([http://www.bostondynamics.com/robot\\_sandflea.html](http://www.bostondynamics.com/robot_sandflea.html)), an 11-pound robot that drives like an RC car on flat terrain, but can jump 30 feet into the air to overcome obstacles. That’s high enough to jump over a compound wall, onto the roof of a house, up a set of stairs, or into a second story window. The robot’s invertible design means it will always land on its “feet.” Sandia developed an earlier version of the SandFlea with funding from the Defense Advanced Research Projects Agency (DARPA) and the Joint IED Defeat Organization (JIEDDO).

After capturing the students’ attention with videos of the real-life robots in action, Maynard brought out the Double (<http://www.doublerobotics.com/>), a remotely controlled, mobile teleconferencing system – think FaceTime on an iPad that’s on a Segway. Through Lockheed Martin’s Gifts and Grants program, Sandia purchased the Double for Robot Garden (<http://www.robotgarden.org/>) as an educational outreach tool. The students especially enjoyed using the Double to peek into a neighboring classroom –Dublin High School’s math classrooms having large windows on the interior walls, allowing limited line of site between teachers.

The movie clips, robot videos, and fun with the Double had a serious purpose – to help the high school students connect what they are learning in the classroom with real life. Maynard spoke to a Principles of Engineering class, which is part of Dublin High School’s Design and Engineering Academy (DEDA) [<http://www.dublinusd.org/Page/4782>].

“My goal is to inspire the students to pursue studies and careers in STEM subjects and show them that all types of people can do this,” says Maynard.

DEDA coordinator Eugene Chou is seeking people in technical fields to speak to DEDA classes and help teachers develop curriculum that ties classroom principles to the real world. In addition to Maynard, Kina Winoto (8965) and Sandia retiree Doug Henson have also spoken to DEDA classes.

“We are looking for scientists and engineers to partner with us to help develop integrated projects that enable students to see how what they are learning in the classroom is put to practical use in the real world,” says Chou.

Doug spoke to a DEDA class that was studying statics, a branch of mechanics concerned with the analysis of loads on physical systems in static equilibrium. He shared his background in aerospace engineering and his personal experience building a plane. “In class, the students were working on a project to design and build rockets,” says Chou. “We will conclude this unit with a field trip to the Patriots Jet Team Foundation [<http://www.pjtf.org/>].”

To learn more about being a guest speaker, visit <http://www.dublinusd.org/Page/7142>. To learn more about DEDA, visit <http://www.dublinusd.org/Page/4782>.