



The open house educated people about the role of robotics in society, showed off some of INL's world-renowned capabilities and inspired youngsters to consider scientific careers.

## INL's robotics open house inspires and educates future scientists

By [Mike Wall](#), *INL Communications and Governmental Affairs*

April 14 was a big day for Edgar Herrera. At Idaho National Laboratory's robotics open house, the sixth-grader spent nearly two hours playing with some of the most advanced, intelligent robots in the world — and thinking about his future.

"I didn't know some of this stuff was possible," Herrera said. "Now all I want to do is robotics. It's totally changed my life."

This sort of reaction is just what INL was hoping for when it organized the open house, an event helping to celebrate the first-ever [National Robotics Week](#). From 1 p.m. to 7 p.m., INL and University of Idaho roboticists showed off their machines at INL's [Center for Advanced Energy Studies](#) (CAES). And so did two robotics teams from Idaho Falls schools — one from Dora Erickson Elementary, and the [Ammoknights](#), based at Hillcrest High.

The main goals of the open house were to educate the public about the importance of robotics in modern society, to inform people about some of INL's cutting-edge capabilities and to inspire youngsters like Herrera, a member of the Dora Erickson club.

"There are a lot of gee-whiz things here that get kids excited," said Kevin McCarty, a computer science doctoral student at U of I. "The hope is some of that excitement will stick in their minds and lead them toward a career in science or engineering."



*This mechanical manipulator arm — the same type as those found on deep-sea submersibles like ALVIN — can lift up to 1200 pounds.*



*INL roboticist Matt Anderson looks on as students try their hand at a flight simulator for unmanned aerial vehicles.*

INL's roboticists had a lot of gee-whiz to go around. They demonstrated several unmanned ground vehicles (UGVs) outfitted with the lab's revolutionary [Robot Intelligence Kernel](#) software, which allows bots to perform complex tasks more or less on their own. Some of the UGVs on display can map and navigate hazardous environments such as tunnels; others can find and mark hidden land mines.

INL scientists also let the public try out their unmanned aerial vehicle simulator, a training platform rigged up on a Macintosh laptop. This station was a hit with Dora Erickson sixth-grader Austin Chesak.

"This is definitely addicting," Chesak said as he piloted a small helicopter toward a landing target on a stretch of computer-generated earth. He hit the bull's-eye, then looked up with a big grin. "Look at that!"

The University of Idaho's robotics demonstrations also engaged young minds. Several of their stations featured advanced haptics: technology that uses tactile feedback to improve the ways that people and computers interact. For example, U of I demonstrated a small remote-control car that becomes more difficult to drive forward the closer it gets to a wall. And a basketball-shooting computer game allowed players to feel the weight of the virtual ball in their hands.

The school robotics clubs showed off their own work, too. Dora Erickson's 25 fifth- and sixth-graders brought out the remote-control LEGO cars they built themselves. And the Ammoknights demonstrated PELE, the robot they built in a six-week rush for this year's [First Robotics](#) competition. The robot is aptly named: PELE (People Enjoying Learning Engineering) kicks a soccer ball with a pneumatically powered "foot."

Michael Rynders, a Hillcrest junior who handles a lot of the programming for the Ammoknights, was

busy getting PELE up and running. But he had time to wander CAES and learn from the professionals, too.

"I'm pretty excited about this," said Rynders, who is planning a career in science or engineering. "You get to see cutting-edge robotics."

Staging the open house was a lot of work. But Derek Wadsworth, manager of INL's Robotics and Intelligent Systems group, said it was definitely worth it.



*Watch a video of the [day's events](#) or read the [transcript](#).*

here at INL."

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*INL's Victor Walker helps a future engineer pilot a bot with a Wiimote.*

"Robots and computers are fascinating to kids," he said. "At the opening, when we turned them loose, you could really see that. You could see the excitement in their eyes."

And Wadsworth cited other benefits of the open house beyond inspiring young people. Most people in southeastern Idaho, he said, know very little about what INL does; they just have a vague idea that the lab is engaged in some sort of nuclear-energy research. And the lab is so large — it employs about 4,000 people — that many INL employees may not be aware of what their colleagues are doing one building over, or right down the hall.

"Events like this are really important," Wadsworth said. "They expose the breadth of research we do