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R.I. schools compete in building robots

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Cranston East Thunderbot members Arisa Lohmeier, Susan Torman, and Nicole Nunez compete.

WARWICK — Arisa Lohmeier surveyed her team’s 18-inch-long robot shortly before the FIRST Tech Challenge began Saturday morning and breathed a sigh of relief.

A fringe of brightly colored plastic fasteners — the kind used to secure garbage bags — made the boxy machine stand out among the roughly two dozen competing robots, as did the machine’s creators, the Thunderbots.

The team of seven students from Cranston High School East — whose sports teams are called the Thunderbolts — was one of just two all-girl teams at Saturday’s competition at the New England Institute of Technology. A handful of young women were sprinkled throughout a few of the other 25 groups.

“It’s so much better than last year’s,” Arisa, 17, said of her team’s robot, which they named Girlz. “Last year we just came in and didn’t know what to expect. We had no idea how massive and complex the other robots were.”

In an early practice run, the computerized contraption managed to toss a few whiffle balls into a bin, release another set of the balls from a dispenser and scoop up a few using the plastic fasteners in a simulation of a street-cleaning machine.

“It was pretty hard to make,” said Arisa, a senior who will enter Brown University this fall. “We ended up taking the whole thing apart two weeks ago and changing the design from a bucket-scooping device to this.” A robotics team from Mt. Hope High School helped them with the redesign, Arisa said.

Last year, the Thunderbots couldn’t get their robot to work at all, and never made it past the qualifying round.

“It was really intimidating,” said senior Mary McAteer, 17, who has been accepted to the University of Vermont.

This year, they intended to make to the finals.

“I’m thrilled,” said Allan Hurst Jr., the team’s teacher, after the Thunderbots managed to maneuver the robot successfully in the first round. “They didn’t even have a moving robot last year. Everything after this is just a plus.”

About 200 high school students from around the state competed in the fourth annual FIRST Tech Challenge, a robotics competition founded by the inventor of the Segway transportation device, Dean Kamen. Sites around the country participate in the competition, and in recent years, the event has focused on attracting young women and students of color, two groups that are underrepresented in the so-called STEM areas: science, technology, engineering and mathematics. The government is trying to promote these fields, as they are considered vital to national security and the 21st-century global economy.

Attracting women to these fields continues to be a problem.

While women make up more than half of all college students, they represent just 26 percent of the science and engineering work force, according to a 2006 National Science Foundation study.

“It’s not easy,” Hurst said of getting girls to participate in afterschool robotics clubs. He taught many of the girls on the Thunderbots at Park View Middle School and encouraged them to join the robotics club when he moved to Cranston East two years ago.

“These are some of the brightest kids in the school,” he said. “But I had to push them to get them interested. I feel if half the world is made up of women, then why not half the designers? Half the engineers? Half the scientists?”

After a good first run, the Thunderbots clustered around their robot, making last-minute adjustments.

Nicole Nunez, 17, who plans to attend the University of Rhode Island this fall as an engineering major, hurriedly added a few plastic fasteners. She also trimmed the length of a few, trying to make the sweeping motion more effective in capturing the whiffle balls.

Junior Alex Martins noticed a few nuts had fallen off during the test run. She quickly passed a handful to Sara Moore, 17, who added more to the metal underpinnings of the robot. The two other members of the team are Allegra Marra, 17, and Susan Torman, 18.

“This is the only aspect of our lives where we feel like we are underdogs because we are girls,” Arisa said. “Today, we were able to walk in with our heads held high. We were proud of what we’d done.”

THE RESULTS FIRST Tech Challenge

Overall winners One team from Providence Career and Technical School and one from Burrillville High School earn the right to go to the FIRST Tech Challenge world championships in Atlanta on April 15. About 100 teams — out of 1,100 from around the country — are invited to Atlanta.

Final match winners An alliance of two teams from Providence Career and Tech and one from Burrillville defeated a team comprised of Mt. Hope Robotics, Prout High School and Aquidneck Island Robotics.

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