

Robots shootin' hoops in Rebound Rumble

By Tiffany Carney, for Silicon Valley Community Newspapers

Posted: 04/02/2012 07:31:29 PM PDT

One basketball court, eight basketball hoops and 60 robots were the perfect combination for the Silicon Valley Regional *FIRST* (For Inspiration and Recognition of Science and Technology) Robotics competition. High school teams from California, Brazil, Mexico and Ohio brought homemade robots to the San Jose State University Event Center on March 30-31, each team hoping its remote-controlled robot would score the most baskets at the Rebound Rumble.

Students, teachers, parents and local professionals, including Steve Wozniak, filled the stands, donning school colors to cheer on their teammates in a two-minute, 15-second three-on-three match. In each match, mechanical robots moved across a 27-foot by 54-foot field--similar to a basketball court--to pick up a basketball, then aim and shoot it into a hoop. The higher the hoop, the more points received. Additional points were awarded to robots that balance on a teetering platform, or bridge, in the middle of the field.

"You learn things that you wouldn't learn in a classroom," said 17-year-old Michael Zuccarino, president of the Saratoga High School team.

Students work together to research, design, build and program a functional robot by utilizing strategic thinking, physics, math, chemistry, engineering and more.

Judges gave awards to the highest-scoring teams and to 22 others in categories including quality, team spirit, creativity, engineering excellence and entrepreneurship.

This year, top honors went to Leland High School with the Regional Chairman's Award, given to the team that best represents the purpose and goals of *FIRST*.

Bellarmino College Preparatory's Eric Bakan and Leland's Kunal Mehta received the Deans' List Award for being outstanding leaders. Bellarmino was also part of the winning alliance for the competition and took home the award for industrial design.

Lynbrook High School received an award for innovation in control. The Gracious Professionalism Award was given to Monta Vista High School for outstanding sportsmanship and professionalism on and off the field.

Nupur Garg, a 17-year-old senior at Monta Vista, touted the shooting system of their robot, El Toro XIV. "Ours is the only team with a [curved] conveyer, which helps center the ball," she said, adding that each year brings new challenges when building the 150-pound robots.

Karen Mahoney, volunteer, former referee and planning committee member, describes it as a "sport for the mind."

Each team has six weeks to build a robot with 15-25 students and the help of teachers, parents and professional engineers. With an average cost of about \$20,000 to \$30,000 per robot, sponsors are an important part of the equation.

Chuck Williams, a Cupertino High School math teacher, said even adults would have trouble getting the sponsorships and building a robot in the limited amount of time allotted. "[Our robot] is 100 feet of aluminum, cut up, and a pile of parts," Williams said. Their robot, Dusty V, made it into the finals, but Williams said it's not just about the competition. "Robotics has a way of introducing students to technology," he said.

As a teacher, Williams enjoys watching his students learn to identify a problem without knowing how to solve it and end with a perfected solution as a team.

There can also be a large payoff; students involved in the competition are eligible to apply for \$14 million in scholarships.

Sophomore Andrew Lawrence, 15, is a team captain for Willow Glen High School's 25-member team, Robo-Rams. Lawrence is one of many students with aspirations to become an engineer. He said their robot is one of the only machines that picked up the ball from both sides, but it did not come without challenges along the way.

FIRST was founded in 1989 by Dean Kamen to inspire an appreciation of science and technology in students.

"The whole process is definitely an experience you wouldn't get anywhere else," Zuccarino said.

Homestead, Presentation, Prospect, Lincoln and Fremont high schools also participated in the event.

For total scores from the event, a full list of award winners and more information about the *FIRST* Robotics Competition, visit www.usfirst.org.