



Rolla Regional Robotics wins 2018 Regional Botball Tournament at SIUE

April 19 2018 9:12 AM



EDWARDSVILLE - Rolla Regional Robotics, of St. James, Mo., won the 2018 annual Greater St. Louis Botball Tournament on Saturday, April 14 at Southern Illinois University Edwardsville. Fourteen teams competed in the Morris University Center's Meridian Ballroom before a crowd of more than 200 throughout the day.

This year's theme was agricultural robotic applications in the Coachella Valley of California. Key game elements included date palms and a tram. The students' robots worked to collect and sort ripened and unripened dates, irrigate the trees, and take a ride on the overhead tram. All of the robotic entries were autonomous, meaning that the robotic entries complete tasks on their own with no human remote control to guide them. The students built and programmed the robots to complete various tasks within the two-minute rounds.

"There was an impressive display of building and programming skills this year," said Gary Mayer, PhD, associate professor of computer science in the SIUE School of Engineering and the event organizer. "A lot of the teams built dual-purpose robots that got some of the easy points out of the way and then dove in for the harder ones. This involved a lot of arm mechanics and movement across the game board.

"One such area was a salmon board where a ring had to be moved up one side of the ladder and another ring down the other side, with pegs in the way. This required that the arm not only capture the ring, but coordinate the lift or decline of the arm holding the ring as the robot moved it along. They deserve a lot of credit with their consistent successes."

Botball teams score equally in three categories of documentation, seeding rounds and the double-elimination tournament. In each category, teams earn a score of 0.0 to 1.0. Documentation points are earned through a team's online submission during the weeks leading up to the tournament and from a presentation that student team members must give at the tournament.

Rolla Regional Robotics had an excellent showing, earning first place in documentation, seeding and double elimination with an almost perfect score of 2.9995, guaranteeing their overall victory. Additionally, they consistently scored over 1,000 points each round, more than any other team in the region, and earned one of the highest scores thus far in the country.

Uncontested seeding rounds were held in the morning. Points earned determined a teams' placement in the double-elimination bracket. After Rolla, the Ada Lovelace Team from Wabash Valley of Terre Haute, Indiana, took second in seeding rounds and runner-up overall with a score of 2.681. The Greenville Comets of Greenville, Illinois, took second in the double-elimination tournament, remaining undefeated until going against Rolla, and finished third in the overall standing.

"While Rolla Regional Robotics continues to impress as they have over the past several years, all of the teams performed well," Mayer said. "While the complex tasks are worth more points, it is often the consistent scoring on the simple tasks that take the win. All

of the teams this year were able to consistently score, and many tackled the harder problems and came out ahead.

“Tasks required students to create mechanical lifts to pick up rings, grasp foam cubes, and scoop up poms. They then had to transport these items to different areas and place them in specific areas of the board. This required a fusion of both building and programming skills, and these teams delivered.”

The **SIUE School of Engineering** offers one of the most comprehensive and affordable engineering programs in the St. Louis region with eight undergraduate degrees, five master’s degrees and a cooperative doctoral program, all housed in a state-of-the-art facility. Students learn from expert faculty, perform cutting-edge research, and participate in intercollegiate design competitions. Companies in the metropolitan St. Louis area provide students challenging internships and co-op opportunities, which often turn into permanent employment. All undergraduate programs are accredited by their respective accreditation agencies.