

# Local Botball Robotics Team Wins Big This Season

by Ruth Knipe and Ogen Perry

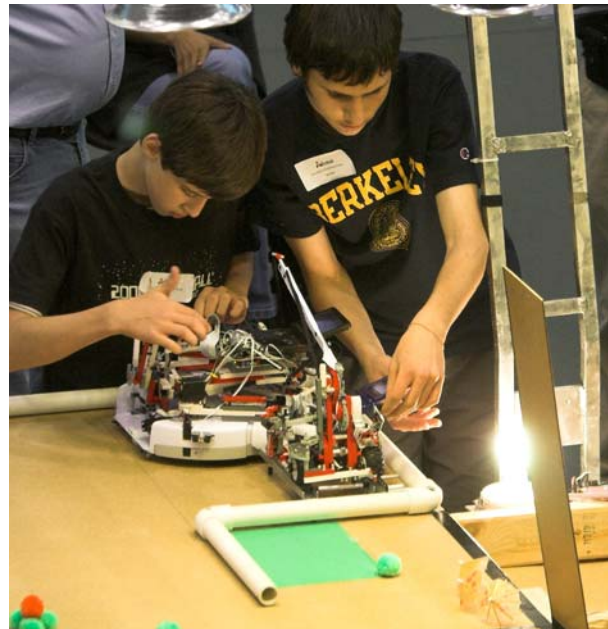
The Los Altos Community Team had a spectacular season participating in the Botball robotics program in 2008. After the team of nine youths' two robots swept the Northern California Regional Botball Tournament in April with three 1<sup>st</sup> place trophies, the team took their robots to the International Botball Tournament in July. They finished 2<sup>nd</sup> place over all with the best performance the team has ever achieved in its 7 year history.

Botball is a robotics tournament sponsored by the KISS Institute for Practical Robotics in conjunction with NASA and several other sponsors. The robots try to score as many points on the game board as they can within two minutes by completing tasks that have predefined points. Botball robots are autonomous; they rely on computer programming to start, stop, and maneuver around the game board. Each robot can be equipped with a camera to detect color and position, sensors to detect contact with an object, and sensors to detect changes in light and distance. In the seeding competition, one team's robots play the game board while in the double elimination competition, two teams' robots play the game board at the same time.

Each year, the theme of the game is different. This year, the game board represented a space station and the tasks reflected protecting the station, its crew, and the food supply before the arrival within two minutes of a dangerous wave of alpha particles from a solar flare.

Seven weeks before the regional tournament, each team receives a kit from which they construct their robots. Teams are comprised of students in middle school through high school. They use science, engineering, technology, math, and writing skills in this hands-on project that reinforces their learning as they design, build, and program their robots, and document their progress over the weeks.

This year's regional tournament took place at Santa Clara University on April 19<sup>th</sup> with 27 teams competing from the Northern California area. The Los Altos Community Team won 1<sup>st</sup> Place in the seeding competition, obtaining the highest two scores in the event. They took 1<sup>st</sup> Place in the double elimination competition by being undefeated in all of their matches. These two big wins gave the team the 1<sup>st</sup> Place Overall trophy. They also received the Judges Choice trophy for "Design/Engineering, Performance, Teamwork, and Sportsmanship".



**Travis Schuh (right) and Brian Silverman attend to last minute preparations before their robots save the space station from disaster at the Northern California Regional Botball Tournament. Photo courtesy of Ogen Perry**

After the successful showing at the regional tournament, a few team members took the robots to the 7<sup>th</sup> Annual Global Conference on Educational Robotics, held at the University of Oklahoma in Norman, OK, to compete in the International Botball Tournament. The conference ran from July 8-11 with the seeding and double elimination competitions occurring on two of the days. 58 teams were represented with five of the teams coming from outside of the U.S. – from Qatar, Nigeria, Kuwait, and two teams from Poland.

The Los Altos Community Team dedicated much of their time before the international tournament rebuilding sections of their robots to improve the speed and reliability of completing the tasks. After a very disappointing 13 points in their first seeding round, they replaced a faulty camera and modified some programming to achieve 125 points in their second seeding round and 240 points (!) in their last



**Kyle Montgomery (right) and Steven Knipe prepare their robots for their double elimination match against Team Nyana from Gydnia, Poland at the International Botball Tournament. Photo courtesy of Garry Knipe**

seeding round – the highest seeding score of the international competition. The team received the 2<sup>nd</sup> Place Seeding Award and in the double elimination competition, they took the 4<sup>th</sup> Place Award. These two wins resulted in the team taking the 2<sup>nd</sup> Place Overall trophy – “2<sup>nd</sup> place in the world!” exclaimed one team member enthusiastically.

The Los Altos Rotary sponsored the Los Altos Community Team, which consisted of students from eight different schools. Travis Schuh, who just completed his senior year at Mountain View High School, organized and led the team of 9 to their victory. The other team members were: 9<sup>th</sup> graders Kyle Montgomery and Parker Schuh, 8<sup>th</sup> graders Kevin Low and Jeremy Macaluso, 7<sup>th</sup> grader Steven Murray, and 6<sup>th</sup> graders Steven Knipe, Alex Perry, and Brian Silverman. Travis Schuh, who is attending Franklin W. Olin College of Engineering in Needham, Massachusetts this fall, remarked, “It’s great that we have some young members who will keep the team going in future years.” He and his brother, Austin – a sophomore at UC Berkeley and a former team member, are both pursuing Mechanical Engineering degrees. The team’s coach, Michael Schuh, believes that “Botball is a great program for enabling students to experience the joys of engineering and learn how to work together on a technology team”. He is interested in helping new teams form in the area.

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