October Newsletter

2016 Robotics Summer Camp

This summer, Citrus Circuits held its first Davis Youth Robotics Summer Camp, where kids designed, programmed, and created their own robot under the guidance of high-school robotics counselors. Each day started with team-building exercises, creating bonds and friendships between the campers that are important in any collaborative activity. Afterwards, the students settled down and got to work, turning their ideas into reality. They built, programmed, and drove the robots around practicing for the competitions at the end of the week. All of the robots were used in three different challenges: the programming challenge, and two driver controlled challenges, in which the robots had to stack colored cubes from one side of the table onto the other. Students were recognized for excellence in programming and mechanical design along with winning the challenges. According Ellie Bair, a past camper, the best part of camp is how "You're actually doing it instead of just thinking about it." And it's true, the best part is not just the friendships and knowledge, but the hands-on nature of it all.

Summer Demos:

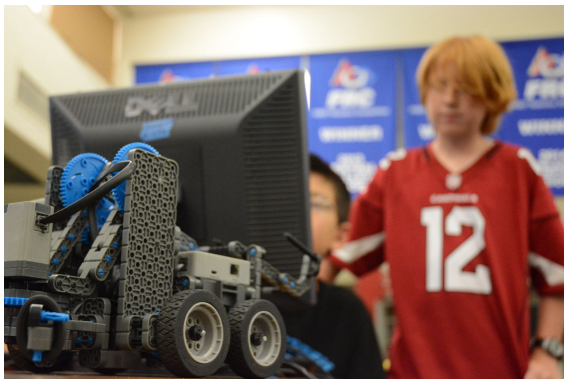
During the summer, Citrus Circuits continued their outreach programs by presenting our robot Adrian, to senior citizens, elementary school students, and junior high school students interested in STEM. Overall, we presented to over four hundred and fifty enthusiastic faces, about 75% of which were kids under age of thirteen. We went to several specific summer camps and meetings, such as the Girl Scouts, UC Davis summer camps, senior centers, and more. Our goal was to show off our robot, and attempt to inspire a love of robotics to both the youth and elders of our community. We encouraged youth participation by giving the kids tasks, such as retrieving the balls and letting them “feed the robot” after we shot balls into the air. They were all extremely excited to participate, and with so many participants showing interest in robotics, we are hopeful that many will be inspired to delve into the exciting field of technology. It’s never too late to learn something new!

Davis Youth Robotics

Citrus Circuits’ STEM program for kids, Davis Youth Robotics, is starting up this fall! Similarly to what our robotics team does, kids get to design, program and build their own robots over a two-week period. The participants are divided into sub-teams, which are subordinate teams that collaborate to create a more complex robot, and work together to create a miniature VEX IQ robot. The end goal is to create a robot that is able to stack conjoined clusters of colored balls on stands located at opposite sides of the field. Some obstacles may only be reached by crossing ramps, which hypes up the competition a lot! During the challenge, sixty

seconds are autonomous, meaning their routes are pre-programmed, and sixty are driver-controlled. During the driver's time, teams have the choice of competing against one another, or combining their points for a higher team score!

We are proud to announce that this year we have about ninety new participants who look forward to teaching our youth about robotics and programming, along with helping them learn necessary life skills. Even so, we are always in need of more parent coaches, so if you want to learn more, visit our team website. We host about 30 teams total, and since different teams start at different times, registration is still open. That means there is still time to sign up! We cannot wait to see all of their smiling faces out in the shop, ready to learn!



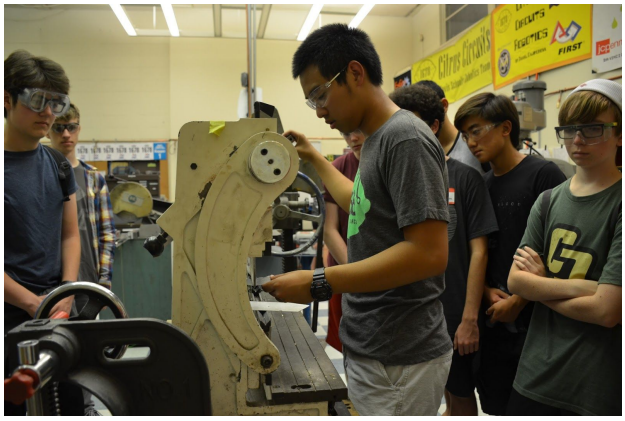
Off-Season Preview

Our off-season competitions are starting up! Off-season competitions are great, not just to keep us sharp and focused, but to welcome new recruits, practice and refine our competition skills and interact with other teams! Continuing on last year's FIRST competition theme, "Stronghold", our world-class robot will be competing in three big tournaments over the next few months. The first, Chezy Champs, was on September 24 to 25 in San Jose, and will be followed by the Capital City Classic (the competition that we are co-hosting) from October 22 to 23 in Elk Grove, and Madtown Throwdown in Madera from the November 12 to 13. Our off-season robot, which is currently unnamed, will soon be ready to roll out and face our competitors on the Stronghold field. The design and build teams are working on said offseason robot, which follows the relative design of the team's 2016 robot, Adrian. The robot drives on 6 pneumatic wheels and uses an intake arm to collect FIRST Stronghold boulders. The robot is equipped with a turret that allows it to aim onto the tower goal without moving its wheelbase, and uses a pneumatic powered catapult to launch the boulders into the goal. We plan to have it operational for the Mad Town competition, and will later be used as a practice robot for the pre rookie team, Valkyrie Robotics.

Recruitment Day

At the beginning of the school year, Citrus Circuits hosted its annual recruitment day to help high school students interested in the team become familiarized with the leaders, learn about the individual sub teams, and enjoy a demonstration of our world-class robot. The evening began with a short presentation run by the group leaders to introduce newcomers to the goals and routines of the program. Afterwards, students were given the opportunity to split into

the different sub teams to learn the purpose of each, and to find one that they were interested in. Team members gave hands-on demonstrations, and provided basic information about the responsibilities of each sub team. To conclude the night, a final robot showcase entertained the crowd of over a hundred aspiring recruits and other onlookers. In the final robot showcase, our 2016 championship competition robot exhibited its mechanical abilities by launching dodgeballs, which were used in the previous year's game, into the crowd. According to Camille Chetelat, a freshman at Holmes Junior High, the night was fun, engaging, and a great learning experience. "I was inspired and will definitely be joining the team this year," she said. Overall, the recruitment session was a great success, and around 90 students registered by the end of the night. We're excited about this growth in the team and can't wait to start working with all of our new members!



Chezy Champs

Even during the off-season, Citrus Circuits remains busy. On September 24 and 25, our team competed at Chezy Champs. Hosted by Team 254 The Cheesy Poofs, at Bellarmine College Preparatory in San Jose, the competition featured 43 teams attending from all over California, as well as three teams from the Pacific Northwest and one from Texas.

Citrus Circuits was ranked second after qualifying matches and was part of the winning alliance with Team 971 Spartan Robotics, Team 604 Quicksilver and Team 2135 Presentation Invasion. In addition to winning, and making the high score of the competition with 267 points during semifinals, we were awarded the Quality Award for the design and operation of our robot.

This event was a great experience for new recruits, and was attended by more than 40 new team members.

On Sunday, Citrus Circuits also hosted representatives from NVIDIA, one of our major sponsors. Our team had the opportunity to meet with NVIDIA programmers and let them see what their multi-year sponsorship is supporting.