

### **Drumroll please...**

We are proud to announce our new 2016 robot, Adrian, a magnificent behemoth capable of breaching the enemy's defenses and seizing victory from their defeated hands. Adrian has a ten wheel drivetrain that supports a pivoting superstructure arm. The ten wheels allow it to cross all nine defenses in the Outer Works, making it possible for our team to breach the opponent's defenses and win a ranking point by ourselves. The arm folds all the way down onto the drivetrain, and can intake boulders from the entire width of the rear. Once it collects a ball, the superstructure unfurls into the shooting position, where the wheels on the shooter launch a boulder into the high goal. Thanks to the programmer's' code, Adrian can autonomously shoot one boulder without a driver operating it in the first 15 second autonomous period. In the last twenty seconds of the match, our robot can unfold its arm perpendicular to the drivetrain, extend and hook onto the bar of the tower, and lift itself off the ground, earning us 15 endgame points.

### **Mapping Out the Road to (Repeating) Success**

Our 2016 competition season is comprised of three regionals: the [Central Valley Regional](#) in Madera from March 10 to 13, the [Sacramento Regional](#) at UC Davis from March 23 to 26, and the [Silicon Valley Regional](#) in San Jose from April 6 to 10. Our season will end with a trip to the [World Championships](#) in St. Louis, which will take place from April 26 to 30. We encourage everyone to invite family, friends, and everybody you know to come watch our triumphant conquest at a competition nearest to you. To follow our progress, go to [www.bluealliance.com](#) to see results, webcasts, and rankings, or visit our [Facebook page](#) for competition updates.

### **Chairman's Award Submitted!**

We have just submitted the essay for the Chairman's Award, the most prestigious award given to teams that best embody the values and goals of FIRST. This is the third time that we have competed for this award. The students responsible for the essay consist of Sophia Stockburger, Maya Brandy, Henry Zhang, Wesley Aptekar-Cassels, Javid Kasraie, Hailey Shapiro, and Mengxuan Zhang, led by Mme Harvey. They've spent months writing and revising, and are happy to finally turn it in. Click [here](#) and scroll down to Award: Chairman's Award to read it.

### **Media & Technology Innovation Award: Complete!**

This has clearly been a big month for us, as we have actually submitted TWO awards! The Media & Technology Innovation Award was submitted on February 24 after two months of effort put forth by senior Jackson Durham, with help from mentors Pearl Corsetto and Clayton Ou. This award is bestowed to teams that best demonstrate their success in using various media channels and connect with diverse audiences in order to spread the message of *FIRST*. In our submission, Jackson included information about our website, Facebook page, newsletter, Youtube videos, and press releases. Check it out by going [here](#) and scrolling down to Awards: Media & Technology Innovation Award.

### **Local Recognition**

We were recently showcased in the Davis Enterprise Newspaper in the article "[Peer mentoring encourages progress as Citrus Circuits gears up for a repeat.](#)" Go check it out to learn more about our team and our off season, when we train new students through one-on-one guidance. [Click here](#) to see more photos of students in action.

### **Buy a Light Bulb for a Brighter Future**

Interested in purchasing some high-quality LED light bulbs? Well look no further, for Citrus Circuits has got you covered! We are selling high-efficiency, energy-saving light bulbs for only \$8. Buying these FIRST Green E-watt Saver light bulbs will not only support the team, but also provide you with a dependable, efficient bulb that will last you 20 years. Still using incandescent bulbs? Don't think about those bulbs ever again; these LED ones will last longer, give off no heat, and provide a clear white light that will be refreshing compared to the off-yellow of incandescent bulbs. But what about fluorescent bulbs? These large bulbs are slow to warm up and emit harmful chemicals when broken. LED light bulbs, on the other hand, last five times longer and leave no noxious chemicals and are completely safe! If you'd like to buy a lightbulb (or two, or ten), please contact us at [frc1678@gmail.com](mailto:frc1678@gmail.com) or [click here](#) and we'll be happy to provide you with as many lightbulbs as possible.

### **Our 2016 Sponsors**

We are proud to recognize our 2016 sponsors! So far, we've raised \$121,000 out of our target of \$146,000. We are still accepting sponsorships and donations. To get more information on making a donation or becoming a sponsor, you can reach us at [www.citruscircuits.org](http://www.citruscircuits.org) or [frc1678@gmail.com](mailto:frc1678@gmail.com).

#### **Jupiter (\$10,000+)**

UC Davis

Nvidia

Schilling Robotics/FMC Technologies

DMG Mori

#### **Saturn (\$5,000-\$9,999)**

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Velox CNC

Mercury (\$500-\$999)  
Aerojet Rocketdyne

### **Interview: Mentor/Alumni - Anthony Diaz-Vigil (Mechanical)**

Anthony was a student on the team in 2010 and 2011, and has been mentoring the team since 2012. Currently, he is working as a machinist and mentoring the mechanical fabrication team.

- How do you feel being on Citrus Circuits prepared you for the future?
  - Being involved has allowed me to become very mechanically minded; any repairs or things I need to fix I can make on my own now. It has also allowed me to get a few job offers; I have my current job because of my robotics experience.
- What is your favorite memory from being on the team?
  - Probably winning the first regional that the team ever won in 2011. That first victory honestly felt better than winning the World Championships. Even though we won the World Championships last year, we actually made grand finals the year before, and semi finals the year before that, so the jump in accomplishments wasn't quite as big.
- How are you still involved with the team?
  - I still mentor the team on mechanical stuff: helping kids get stuff done in the shop, fabricating parts. During build season I help with prototyping; this year I had a group of eight kids and we tested a climber involving a rotating arm and a linear pull system. I'm also part of the machine shop training, so prior to build season I train students on the mills, and sometimes lathes, depending on if Devin [Castellucci] or who else is in the shop. So every student using a mill currently got trained from me.
- How has the team changed since you were a member?
  - Oh, the team has changed a lot! Back when I was on the team, we pretty much only had hand tools, and were lucky enough to have a small drill press. Now we have a full machine shop that's better than some of the industrial machine shops in town. Having more students trained on all the machines as well as CAD makes working a lot easier. Just having more competent students makes our time in the shop much more efficient.
- Tell me about your experience at the 2014 World Championships.
  - That was a fun season because it basically verified that the success from the season before wasn't a fluke. The season before gave us a taste of Einstein and then we tried really, really hard and everyone was committed and we made it there again.

- At the championships, I was mostly responsible for helping out rookie teams that couldn't really do much so that they could have a chance to play a game at a somewhat competitive level and have a better overall experience. It also helped us be more competitive and seed number one in our alliance.
- Other than that, I was in the pits with our team only when something broke or something went really bad. I honestly thought we had the third match; we were ahead up until the last couple seconds, and then they got the final shot and we lost. No hard feelings, since we got it the year after and beat them...did we beat them? No, we didn't. Anyway, since then, our relationship with the world champions from that year has improved. 2014 was fun, it was a fun game. I'm hoping that this year we'll repeat last year's success.
- Do you have any advice for current Citrus Circuits mentors and members?
  - My advice would be to do what you like. Honestly, the amount of time all the mentors put into the team would not be possible if they didn't like what they were doing. That's true of the students as well. It seems like the average high school student would just want to play video games or do something along those lines at home, but most of these students, especially the really committed ones on the team, spent their entire weekends for build season plus some, so several months at a time in the shop doing what they like.