

TEAM 4909



Billerica Bionics

Week 4 of Competitions 3/24/16– 3/26/16

UNH Coverage

Our second district competition was at the University of New Hampshire in Durham, New Hampshire over Easter weekend. At our second event, we were able to bring our A-game after our experience and practice from our first event in week 2.

In our six hours of robot access time between the events, we overhauled the electronic control system of the robot to eliminate the performance issues we had in the first event. The resultant system was much more robust and performed flawlessly at UNH.

We did extremely well at UNH. In the qualification matches, we finished in fifth place. According to our scouting database, we had the highest high goal shooting accuracy of 76% – out of forty teams including a dozen high goal shooters. And it really showed- in most matches, we were able to put out 32 points per match on average to contribute to our alliance.

In elimination matches we were the alliance captain of the fourth seeded alliance. Among other things, we finally broke the quarter final curse, and made it to the semi-final round! In an intense three round bout against the first seeded alliance, we lost in the third match only by three points with a final score of 153-156. The first seeded alliance went on to win the entire competition.

At UNH we won the Hard Hat Pin award, the runner up for the UL safety award. We are confident that we will qualify to compete in the New England District Championship in Hartford Connecticut at the XL Center. Hope to see you there!

Get Connected!

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[Game Information](#)

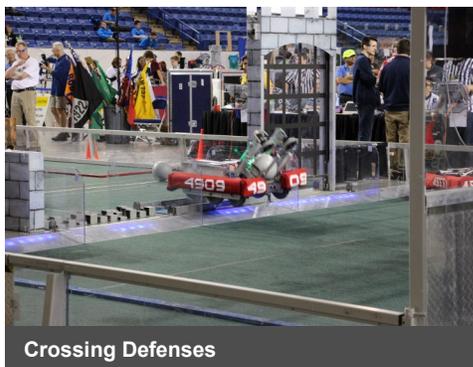
[FIRST Website](#)

[PTC Creo](#)

[Game Animation](#)



Shooting a High Goal



Crossing Defenses

FIRST
STRONGHOLD

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NATIONAL
Robotics WEEK

April 2-10 2016
www.nationalroboticsweek.org



Selecting an alliance

Semi-Finalists!

As the fifth ranked team, we were an alliance captain for elimination matches, and were the fourth seeded alliance. Based on our intensive scouting information, our picks were Team 5813 – Morpheus, a high goal shooter and Team 138-Entropy, a low goal shooter. In the quarter final round, our team-mate, 138 was having some issues with their drive base, but even with the lesser functionality, we were able to win the quarter-finals and pull through onto the semi-final stage after an intense three-match bout versus Lowell and Burlington.

Our semi-final matches were intense. We were pitted against the first seeded alliance, made of the first and second ranked teams at the event, Team 1519 – Mechanical Mayhem, and Team 319 – Big Bad Bob. In the very first match, a faulty autonomous by 1512, the third robot of the first seeded alliance, resulted in it tipping over crossing a defense. The result was that we were able to shoot with no defense, and took the match in a landslide of 167 to 139. In the second match, 1512 was operational, and made it much more difficult to utilize our scoring potential, and the first seed took it 140 to 162.

At that point, each alliance had one win, and it was taken to a third-tie-breaking match. Boulders were flying – robots cruising over defenses – bumpers slamming in defense – and before you knew it BZZZT – the final buzzer rang. When the dust settled the final score was 153-156... we had lost to the *first seeded alliance* by just three points. It was well fought, but we had lost to the better alliance. They went on to win the whole competition, and we wish them well.

UPCOMING EVENT

New England District Championship

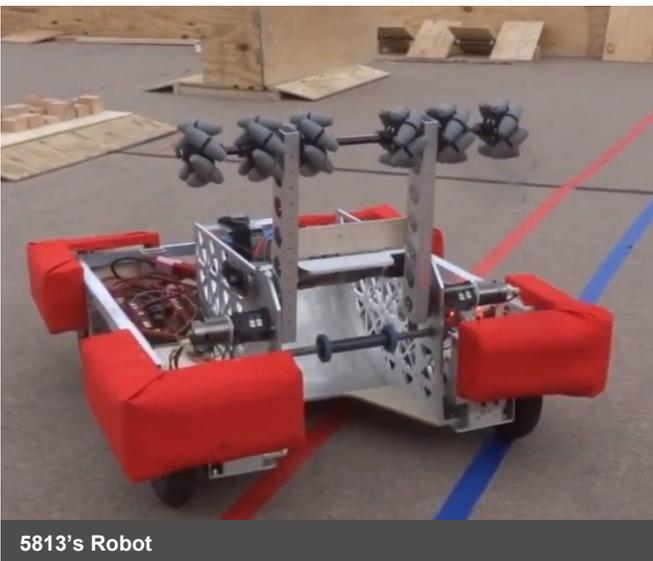
4/14/2016 - 4/16/2016

XL Center

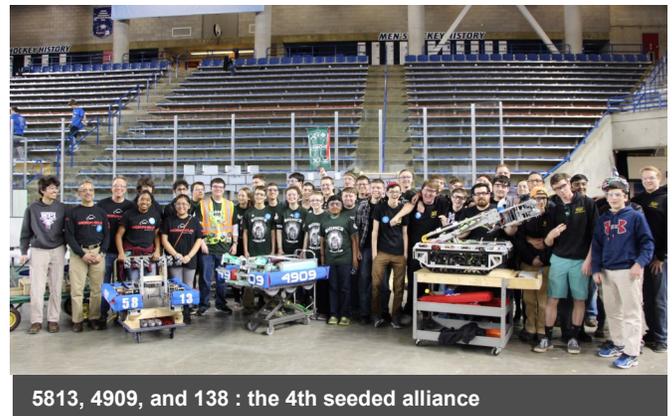
1 Civic Center Plaza,
Hartford, CT 06120



Team 138's robot



5813's Robot



5813, 4909, and 138 : the 4th seeded alliance

Robot in 3 Hours

Most of the time, when a team arrives at a FIRST event, they have either a mostly or entirely complete robot with only minor adjustments or tweaks necessary to gain functionality. For team 5633, this wasn't the case. Through some unfortunate strictness in their school's rules, and workspace unavailability, they showed up to UNH with a kit of parts, pneumatic wheels, a few scrap pieces, and no hope in sight.

We saw them set up their pit when they arrived, and were wondering why their robot wasn't there. We had simply assumed that perhaps it hadn't been transported yet. But when we saw the classic blue Andy Mark kit of parts box, we became concerned. Almost immediately, two of our team members from the electrical team went over to see in what ways they could help. In just a few moments after they had walked over, dozens of members from other teams started flooding in, seeing in what ways they could help. PerSEVERE, the team from Lowell, in addition to some other teams furiously started hashing out the chassis and a simple manipulator. Other teams, like Mechanical Mayhem, and a programmer from our team, worked on punching out the code to get it driving.

By lunchtime on the first day of qualification matches, Team 5633 went from having a jumble of parts to a rolling robot, thanks to the help of over a dozen teams at the event. Now, you may be wondering- if we had to compete against them, why would we help them? Well, one of the founding principles of FIRST is "Coopertition". Even though we want to perform well and win, that shouldn't be a reason to not help out another team that looks like they could use it. Things like these help set apart FIRST as a sport for the mind to be a positive competition that promotes things like teamwork and good sportsmanship.



The AndyMark Kit of Parts box



5633 dropping a boulder in the low goal



Our match with 5633

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