



# RoboRoos Newsletter

APRIL, 2016

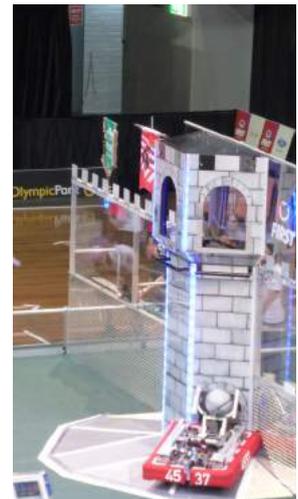
## SPECIAL POINTS OF INTEREST:

- In March we went to the Australian Regional FIRST Robotics Competition!
- The FIRST Ladies Breakfast was a success
- Prime Minister Malcolm Turnbull and Foreign Minister Julie Bishop swing by!
- How we helped out country teams
- The social side of robotics

## INSIDE THIS ISSUE:

Australian Regionals 2016 Overview	1
Prime Ministerial Visit	2
FIRST Ladies Breakfast	2
Helping Out in the Outback	3
Mentoring Pedare	3
Safety	3
Socializing	4
Thank you	4
Upcoming Tuesdays and Sundays	4

## Australian Regionals 2016 Overview



This year's Australia Regionals were held at Sydney Olympic Park from the 17th to the 19th of March. It was an amazing experience and we had the best time fielding, driving and fixing the robot, scouting, dancing, talking and bonding. Our design aims were to have a robot that could score low goals and go over a wide range of obstacles. If time permitted we would also go for climbing.

Charlie Ryan-Kane (Mechanical Captain): We successfully took on some very challenging designs and watched the robot evolve from a square aluminium frame with some very odd wheels to a robot that could pass over many of the obstacles, collect a ball and even attempt to scale the tower. Due to the rough nature of

the game and some design fault we had some major mechanical mishaps including a broken ball collection shaft and a climbing mechanism which was too wide. Fortunately, the mechanical students, led by mentor Piotr and alumni Ryan Matulick, were able to fix these issues and keep our robot competitive.

Enzo Rugai (Software Captain): When we arrived at competition, the number one priority was refining the ball collector which, without the software applying just the right torque, would be virtually useless. The other main task software had during the competition was to create and fix the autonomous code, which earned us more points than our climber and ball collector combined.

Emily Mansfield (Electrical Captain): We were lucky enough this year to have a robot which, for the first time, had no major electrical faults during the whole of competition. I would like to thank all the students and mentors whose hard work during the build enabled this to become a reality.

In conclusion, the RoboRoos team is proud of how they all worked together to get onto the practice field on the first day and have a robot that stayed competitive enough to be an alliance captain in the finals rounds. It is a very intense environment and not something that you can simulate in any classroom or workshop. By coming to regionals you learn so much more than how to build a robot, how to work in a team, support each other when things don't go as you would like so your robot and the team becomes more resilient.

*“The team is very proud of how they worked together to get the robot into the finals.”*

# Prime Ministerial Visit

*“How wonderful it is to have the PM here to watch the game”  
-Angela Simmons*

Suddenly here at the Sydney Olympic Park Sports Centre there was a huge crowd of students, mentors and families congregating near the playing field. Our team 4537 RoboRoos are competing next, are they here to watch our match? .... Oh it's the Prime Minister of Australia, Malcolm Turnbull, alongside industry leaders, edu-

cators, families and fans and joined by Foreign Minister, The Hon Julie Bishop MP, and the Member for Reid, The Hon Craig Laundry MP.

How wonderful it is to have the PM here to watch the game, FIRST Stronghold, and speak with our drive team members. Prime Minister Turnbull said they were excited to visit the event and to be

so inspired by such brilliant young minds. “They’re right here at the cutting edge of technology; the technology that delivers jobs, the opportunities of the 21<sup>st</sup> century for our children and our grandchildren.” It’s great to see high profile attention and support for STEM.  
-Angela Simmons



# FIRST Ladies Breakfast

Each year the ladies young and old are invited to gather at Sydney Olympic Park to celebrate, support and network with girls and women involved in FIRST programs. This is proudly supported by Google and is growing each year.

Guest speakers included President of FIRST Don Bossi all the way from New Hampshire

USA, a Queensland member of parliament and Jo Burston, a female author/entrepreneur. We then shared a colourful breakfast and had the opportunity to network with others in the field of STEM. We can see now that STEM is not just strictly for males and we can make big changes in the field.

#ifshecan was written by Jo Ellen Burston about other female entrepreneurs under the age of thirty who have started their own business. It outlines their challenges and how they overcame these to succeed. A copy will be left in our workshop so everyone can gain inspiration from their stories.  
-Kirsty Lithgow

# Helping out in the Outback

A group of three mentors, Adam (team 4537 RoboRoos) Aaron (team 3132) and Anna (from Washington State) spent two days apiece with several teams in the outback during the build season. The RoboRoos team followed up with these teams at competition and helped them with all sorts of trouble shooting and problem solving. Dunedoo (6118) and their bucket stood out on the field, reaching finals. Camden Haven High School also reached finals but just couldn't quite pull off their great auto-

nous plan of shooting low goals sideways! Musswellbrook (6061), a coal mining town fielded a team with an innovative modular design. Our mentors and students worked with them in the pits with their wiring, motor issues and software debugging. We all wanted to see them in the finals. Wee Waa from cotton country had an excellent tractor bot. They needed help to fix their drive system when one gear box started to die but overall had a tough and reliable robot.



## Mentoring Pedare

This year we welcomed the second SA based FRC team into the competition, from Pedare Christian College (6204). Throughout the season we guided them, remembering how hard it is as a rookie team. There is just so much to learn with FRC. We managed to turn our crate into a "Babushka Doll", where out pops not one, but two robots! And a

mobile workshop kit of spare parts which were well utilised by the Pedare team located next to us in the pits. Bumper making, wiring and helping to keep them on the field kept any spare RoboRoos team members busy. The worst problem was how to get it all back into the crate at the end of the comp!!

## Safety

Safety is at the forefront of everyone's minds during the First Robotics Competition. To ensure people are alerted when they are active, each robot is required by regulation to have a signal light that is visible from every angle. This light flash-

es brightly when the robot is enabled to warn anyone in the vicinity. Unfortunately for Dunedoo, theirs wasn't, and they couldn't go on the field without it. Adam, one of our mentors, spotted this and as it seemed like an electrical problem he enlisted me to help.

Fortunately, after a few minutes of probing we dis-

covered that the light was simply connected to the wrong component. With some help from our Electrical mentor, Geoff, one of the students from Dunedoo and myself quickly added a terminal to the lights and plugged it into the correct spot, allowing their robot to compete.

—Enzo Rugai

# Socializing

One of the best parts about competition is meeting people from other teams. Team 1739, the Chicago Knights, were great to talk to, as well as all the other teams from around Australia, China, India, Singapore and Taiwan. On the first Wednesday night, FIRST ran a pre-competition party which was

packed with an amazing atmosphere, pumping music, dancing, pizza and new friends. Many of the team were able to attend this party and they all had a great night! During our visit to Sydney we also grew closer as a team. Multiple visits to the park both during day and at night

were very entertaining, as was watching Deadpool, staying up late to see magic tricks around the campfire by Drew and Enzo, talking around the table while eating delicious food at the lodge, gossiping in the bunks at night and just spending time together.

# Thank You

After competition, there are many people to thank. Firstly, thank you to Tracey, Pam and Phillip for volunteering at competition to do the hard job of resetting the field after each match. You gave us the best opportunities to do well and also gave our team a good name.

A big thank you also goes to all the parents and mentors who helped out at competition in the pits, stands and everywhere in between. Thanks for keeping our robot working, driving us to the right place at the right time, keeping us well fed and watered and for constantly encouraging us.

Thank you to all of our sponsors big and small. It's you who make this whole program a reality. We appreciate your support and hope you are proud of our successful performance at competition this year.

And most of all, the biggest thank you goes to all the students who are part of the RoboRoos. Everything the club does is for you, and the amazing time everyone had at competition just makes everything worth it. Keep it up!



## Calendar - upcoming 'Tuesdays and Sundays'

### **APRIL:**

Sunday 10th 2pm-2:45 promptly  
Chairman's meeting @ Charlie's house.

Sunday 10th 2-5 pm—club pool party @ Charlie's house

Tuesday 19th 7-9:30pm demonstration preparations and Sketch Up training @ the Workshop

### **MAY:**

Sunday 1st 1-6pm Photobook, Dummies Guide for Communications, Website Refresh and Game Design @ the Workshop

NO TUESDAY MEETING, INSTEAD:

Saturday 14th bonfire night and AGM @ James Bretag's house, more details to come.



## Hopping into engineering!



### Who are the RoboRoos?

We're a community group, FIRST® Robotics Team and so much more—including South Australia's first and only FRC team.

The team's purpose is to excite young minds about STEM (science, technology, engineering and mathematics), by using a common interest: Robots.

As part of this, students get real industry experience, with help and guidance from dedicated industry professionals as mentors. It circumvents the age-old circle of being unable to get a job due to lack of experience.

Part of our ethos is to maintain a gender balance, which we continue to strive for and achieve.

Contact us at: [roboroos@roboroos.org.au](mailto:roboroos@roboroos.org.au)



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