

www.roboroos.org.au

WELCOME TO
NEW EXCITING
SEASON FOR
ROBOTICS

CLUB DATES / UPCOMING EVENTS

FRC & FTC Training nights

Tuesdays 18:30 - 21:00

The University of
Adelaide, Ingkarni
Wardli (Level 2 Room
218)

Whole Club Party & AGM

Sat, 18 May
16:30 - 21:00

242 Paracombe Rd,
Paracombe SA

Club Open Day

Sun, 26 May
12:30 - 15:30

The Atrium, Ingkarni
Wardli Building, The
University of Adelaide.

DDU Sydney

26 - 28 July 2019

Macquarie University,
Macquarie Park NSW.

Outreach event - Science Alive

2 - 4 Aug 2019

Adelaide Showground,
Goodwood Rd, Wayville SA

FTC Event

Sun, 11 Aug 9:00 - 16:00

Banksia Park International High
School, 610 Milne Rd,
Banksia Park SA

Student Robotics Club of S.A. Inc RoboRoos Newsletter

CONGRATULATIONS

FIRST VOLUNTEER AWARD 2019

Rob Zibell received the volunteer of the year award at the recent FIRST robotics competition in Sydney.

Rob is the founding member of the RoboRoos, which was established in 2010. He started the First Lego League competition in South Australia and has led the RoboRoos on to bigger and better things every year since.

He is passionate about teaching robotics to students and showing off our robots to the wider community. If you need ideas or anything done, he is the man! He is always keen to be involved and gets so much out of seeing the students develop their skills.

He is sometimes so creative we

don't know what's going on in his head, but he always manages to pull something out of the hat.

This club would not exist without Rob Zibell; we are so proud of him and so thankful of all his hard work over the years.

Congratulations on the award!



ROBOROOS ALUMNI

The following RoboRoos alumni are graduating this year:

- Jack Mansfield, Bachelor of Engineering
- Ryan Matulick, Bachelor of Computer Science

They were all involved in FLL in our first year of competition in 2010 and remain involved in the club.

'I would never have thought of studying computer science if it wasn't for Roboroos,' said Ryan

“I would never have thought of studying Computer Science if it wasn't for RoboRoos,” said Ryan.

Jack reported on going for a job interview at SAAB, “the group interview was just like an FLL core values session, my experience with RoboRoos was invaluable”.

Congratulations!



1st Place PROGRAMMING AWARD AT WORLD FESTIVAL DETROIT



Hearty Congratulations to the RoboRoos East Team for winning the 1st place in the Programming award.

The success is well deserved after a year long season in FLL. Once again you have made Australia proud by continuing to keep us on the global map!



FROM THE CAPTAIN

Hi Team!

I want to congratulate the FLL teams, FTC team and FRC team on a fantastic 2018–2019 season with the FIRST *Launch* games. All our teams produced high quality robots that were competitive last season, a true credit to the students, alumni, mentors and parents involved with each team.



Most of the upcoming training will occur at our new training room hosted at the University of Adelaide in the Ingkarni Building. The training pod has worked hard on fitting in a schedule, including fun events such as building a scrufeer robot, safety training, and essential knowledge for electrics and pneumatics! And don't worry there are a few parties in there as well. Please ensure to check your emails and the calendar so that you don't miss out on any of the fun!

Thank you all for the great opportunity to act as the Captain of the club, it's been a great year and I'm very proud of how all students have chosen to be gracious professionals and welcoming to new students and each other regardless of any differences. We truly have a special community I hope you are all proud of. This year's game theme is all about building opportunities and communities that work together, so let us continue to *rise* to the challenge, *rise* to our goals, and to raise each other up!

-- Jess

From my perspective, I think this was a great year for our club, with more detailed goals being set, more feedback being taken and more

parents stepping up to help in any way they could! These small things allowed us to be more successful and to do more meaningful activities in the past year, which was a great growth platform! Our work is far from over yet, so please remember to lend a hand where you can so that we can continue to thrive and grow!

Training for the year has commenced once again each Tuesday night of the school terms!

"I think this was a great year for our club, with more detailed goals being set, more feedback being taken and more parents stepping up to help in anyway they could"

DDU SEASON

The DDU season commences on Sunday 2 June — this is for FRC age students. Team meetings will be held at Hillcrest. The competition is from 26 to 28 July in Sydney. More information for new members will be available at the open day.

FLL WORLD FESTIVAL 2019 DETROIT-ROBOROOSEAST

The RoboRoos East team recently attended the Detroit FLL World Festival after qualifying at the Australian National competition.



The first day consisted of setting up our pit by constructing a balloon roof and putting up several posters. When this was done, the team ventured off to enjoy the rest of the day badge hunting and visiting the other FIRST competition areas.

The second day was when judging started, and the teams next to us that had been friendly until then, suddenly turned into competition. Our day began with our judging block squeezed in between three robot runs, where we scored: 232, 192 and 208, which we were all happy about. This continued into the afternoon, with our project judging on our sleeping suit the: Smart Sleeper followed by robot design judging, and finally, core values. To top it off, we received an encore presentation invite, which we graciously accepted, and then a night with the Tiger Techs playing laser tag and arcade games!

The final day started with a pit pack down — we spent the entire morning popping balloons and removing posters. Once this was completed, the much loved high-five train where each team

high-fived every single other team began. This ended with sore hands and tired arms! After that, we had lunch and



headed over to the award ceremony where we picked up an award: 1st Place Programming! All our hard work was acknowledged and we felt proud for what we had collectively achieved!

After the ceremony and countless photos with other teams, we retreated to our hotels tired, happy and looking forward to next season.

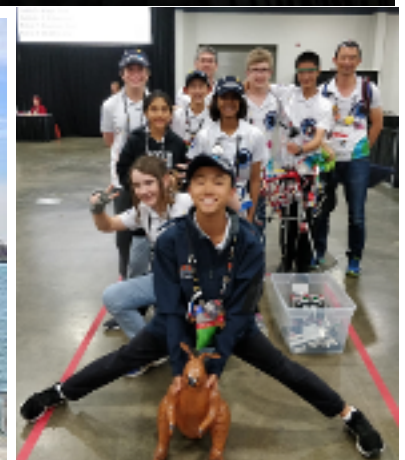
This season was amazing and we give special thanks to our coach, mentors and parents for making this possible. Hoping for another season as fun and successful as this!

GO ROOS!

--Sam



Encore Performance



INTO ORBIT – MISSION ACCOMPLISHED!!!

The 4-day FIRST World Festival in Detroit that concluded on 27 April 2019 marked the end of another long season for the RoboRoos East FLL team.



Following the success in Sydney national championship last year and nearly 2.5 months of preparation leading to the event, the team took home one of major FLL awards: 1st place programming. In addition, the team did the Encore performance on stage among the best teams from around the world.

The award recognizes the team's excellent programming and the many years of continued improvement the team has made to their robots. It is well deserved! The team's exemplar performance in all three areas of the FLL, Core Values, Project and Robot, was also acknowledged by the judge's feedback.

It is the diversity and good teamwork that make this team successful. Every kid in the team brought something unique to the mix: Alan's humor and LEGO skill, Bianca's confidence and presentation, Bilal's thoughtfulness and ideas, Chaya's communication and research, Derek's hands-on and team spirit, Isabella's enthusiasm and can-do attitude, Itay's programming talent and persistence, Jack's open mind and all-rounded contribution, Sam's wit and resourcefulness, and Zuhayr's commitment and strategy. What is common among them is the love of fun.

Credits are also given to the supportive parents, coach and mentors, the Student Robotic Club of

SA community and our sponsors. It is this awesome group of people and community that helped the team to reach its potential.

Some of the highlights for the team were:

- Meeting the world top teams and immersed in the festive atmosphere
- Achieving 232 points, or 87% of our highest, in the first official round
- Skyping with Pamela Melroy, Director, Space Technology & Policy- Nova Systems on the 40th floor of our hotel
- "Smart Sleeper", our project, was named the "most innovative" by another award-winning team at the Award Ceremony
- Checking out the coolest robots in action
- Participating in a laser skirmish with the Tiger Tech team, and our mentors (aka, ET or easy targets)
- Riding People Mover among Detroit's skyscrapers and visiting Astroia Pastry shop in the rain
- Soaking (literally) in the climax of closing ceremony in Ford Field



While some families are still adjusting for jet lags from the world trip, the next FLL season is just around the corner! The new season's theme is City Shaper, the details of which will be released officially on 1 August. The team had already started talking about the new season while they were in Detroit!

- Jane, Roboroos East Coach

FTC MURRAYLANDS MARCH 3RD 2019

What a great day the Murraylands FTC Scrimmage was ... a fabulous showcase the RoboRoos and the participating school teams and now all the field action can be found on Youtube (search "[Murraylands FTC](#)").

The capability and reliability of the team robots were a credit to the students and their teacher mentors. The event made good use of the flexibility of the newly refurbished STEM area at Murray Bridge High School. It was a world-class demonstration of STEM learning coupled with fun and excitement. All of the participants were kept busy and focused between 9 am and 4 pm, some had to be reminded to have a drink and get some lunch. One lad said it was the best fun he had ever had doing schoolwork and he thought it was probably the first time that he had ever done schoolwork on a Sunday.

The event was officially opened by the Hon Adrian Pederick MP, Member for Hammond. He was very impressed with the event and



remained to watch most of the matches. He was so taken by the robots that he made a special request

that the field be set up and that he be allowed to drive the Murray Bridge High School robot when he returned the following week to officially open the refurbished STEM area on behalf of the Minister for Education.

The finals were worthy of a movie script with a tie in the first match and then a fourth final match being required as the winning alliance came from behind to claim the best of three games result. In the winning alliance were the RoboRoos as captain and Tyndale Christian



School. The other final alliance was Murray Bridge High School as captain and Mannum Community College. Karoonda Area School, Banksia Park International High School and Unity College also had teams competing. This scrimmage was possibly a world first for FIRST as all seven competing teams were rookies and all the teams have consecutive team numbers. All these teams were formed last year by the RoboRoos due to grants provided by Google via FIRST Australia.

The day was only possible due to the generous, skillful and diligent help of many volunteers. Thanks to Ryan O'Malley, an alumni member from Trinity College FTC, Scott Stevens from UniSA and 20 energetic volunteers from the RoboRoos.

The closing ceremony and presentation of awards was performed by Mr Martin Edwards, General Manager – Maritime Services Group, ASC. ASC generously provided the fields used for the competition.

I'm sure that all those present went back to their school communities very impressed and ready to help promote FIRST robotics.

--Jeff Rabone

2019-2020 NEW SEASON



The 2019-2020 season theme has been released!

FIRST RISE, powered by Star Wars: Force for change!

This time around teams are “... setting out to inspire citizens of the galaxy to work together, strengthening and protecting the Force that binds us and creating a place where collaboration and collective wisdom can elevate new ideas and foster growth. Together, we RISE”.

The RoboRoos can barely wait to get stuck into next season’s games and continue growing and creating our community under this new theme!

CITY SHAPER



INFINITE RECHARGE



SKYSTONE

PRESENTED BY Qualcomm



FRC SYDNEY 2019

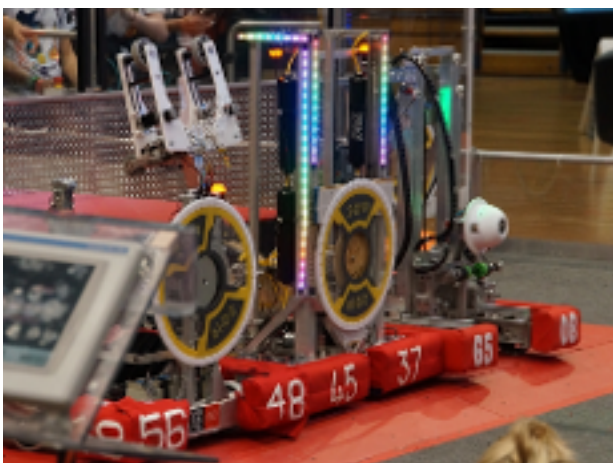
This year's FRC (FIRST Robotics Competition) game was Destination Deep Space, celebrating 50 years since the first moon landing. In this game, teams of three robots first had to drive blindly for 15 seconds while a "sandstorm" passed, then the teams had 2 minutes where they had to work together to place hatch panels and cargo into two rocket ships and a cargo ship. In the last 20 seconds, teams raced back to their HAB zone and climbed up on to platforms to get ready for take-off! The game was low scoring with a panel being worth 2 points and cargo only 3 points, ensuring all games were close and depended on speed and tactics.



This year, we competed at the South Pacific Regionals in Sydney from March 15th to March 17th 2019, alongside 62 other teams, including teams from India, Taiwan, China, New Zealand, Hawaii and Singapore.

DAY 1:

Much of the team was late arriving at the competition, with flights being delayed and diverted because of the storms in Sydney; however, the robot arrived intact! Everything looked good on practice day, but the climbing mechanism was damaged, because of overextension due to limit switch failure. As this was a core element of our team's strategy — to climb to the highest platform of the HAB — it was quite disappointing and detrimental to our performance. The students and mentors in the pit worked hard, and different options for climbing mechanisms were tried over the course of the day with mixed success in the pit area, but we were unable to climb on the field again.



Practice matches regardless, with the drive team improving over the day and driving competitively, our robot performed well in



general play, with excellent maneuverability and speed. In particular, delivery of the hatch covers in the sandstorm period (the blind first 15 seconds) was dependably good. Our robot interacted well with the oddly acting cargo balls and was consistent and fast compared with the competitors.

The whole team was able to get involved at the competition, with students working in the pit, driving the robot, scouting for data on other teams, or wearing kangaroo onesies to boost morale!

FRC SYDNEY 2019 CONTD

DAY 2:

Day 2 saw the girls on the team headed off to the FIRST Ladies Breakfast. There, they heard from leading female pioneers in STEM fields and got a chance to socialize with other teams, judges and referees! The formal competition commenced after the breakfast, with the RoboRoos again competing well in general play but poorly in the end game due to the lack of a climber. This translated into two good wins for the day (when teamed with a good climbing robot) and a number of close losses. In most games, our robot compared favorably with our alliance partners, scoring well in the field and often outscoring the other team, losing out by a few points in the end game.

We were able to field a robot for every scheduled game, with the drive base and manipulators for hatch and cargo reliable and effective throughout needing little repair.

The judging of awards was also at play on the day; our students clearly articulated the design of their robot and described the outreach and training we do as part of the club. The judges loved many clever aspects of our design and how excited the students were about their robot and team spirit.

DAY 3:

The last couple of matches were played before alliance selections were made for finals. Final rankings are always based upon ranking points, and these were determined by winning games and climbing. Unfortunately, our team did not perform well in these tasks through the minor rounds, so we were ultimately ranked at 47 of 62. Sadly, because of this, we did not attract the attention of alliance captains and were not selected to compete in finals.



However, it wasn't all sad, with our mascots owning the mascot lead YMCA, and students from all over the world wanting pictures with our kangaroos!



FRC SYDNEY 2019 CONTD

SUMMARY

We had to deal with some major difficulties at the competition, starting with travel disruption and inadvertent damage to the climbing mechanism that could not be repaired during the competition. However, the robot competed well on the field with very reliable mechanisms, excellent drive team and sound strategic plan. Ranking points were heavily weighted towards those robots with an effective climber.

- Our final standings were:
- Ranking points: 47th overall
- Cargo loading: 28th overall
- Hatch covers: 14th overall
- Score (excl. climb): 30th overall
- Points for/against: 357/356

We were satisfied with the result, having met the build goals for the season, being a reliable and fast scoring robot, ultimately

able to fill up to eight game scoring pieces on its own in a match, ranking the cargo and hatch scores of the robot above many of the top-ranked teams. It was disappointing that the key feature that suffered damage was ultimately the major determinant of ranking points and end outcome for the team. However, in the end, it was another great competition experience filled with loud music, dancing, gracious professionalism, cooperation and lots of smiles.

A big thank you to this year's mentors, alumni, parent volunteers and our team captain and vice-captain, Jess Shannon and Kara Jenkins, for making this season a successful and positive experience.



NEW TRAINING ROOM

The RoboRoos are thankful to our sponsor University of Adelaide for providing us with a computer lab room to use for our training for the whole year. The room is located on level 2 of the Ingkarni Building and features plenty of space and computers for use in training. Please ensure to check your emails and the calendar so that you don't miss out on any of planned training sessions and fun to come.



Training will be occurring every Tuesday night for the school terms and should be lots of fun, with upcoming sessions on safety, CAD, design and much more!

Please note that the safety of the students is always our number one priority and, hence, children cannot be roaming around the University of Adelaide at night. Therefore, please ensure a responsible adult can escort students to the training room and sign them in at the start of the night and be present for collection. We always encourage parents to stay and get involved though!



MEMBERSHIP

There's never been a better time to be involved with the RoboRoos and join in the fun of the coming season!

Management has reviewed the fees and have come up with a structure that includes a separate Club Membership fee and Competition fees. This has allowed us to offer a discount to those students who are involved in more than one competition.



THE ROBOROOS PRESENT



MAY 26

OPEN DAY

ALL WELCOME

ADELAIDE UNIVERSITY INKARNI WARDLI
ATRIUM
12:30 - 3:30 PM

ROBOTS | MUSIC | FUN | ENERGY | FRIENDS

MORE INFORMATION AT
WWW.ROBOROOS.ORG.AU
TEAM ROBOROOS ON FACEBOOK
TEAM ROBOROOS ON INSTAGRAM

STUDENTS ROBOTICS CLUB OF SOUTH AUSTRALIA INC

MEMBERSHIP PERIOD 1ST MAY 2019 – 30TH APRIL 2020: FEE STRUCTURE

A Club Membership fee of \$80 per student applies.

Competitions:

- Duel Down Under: \$90
- FIRST Lego League: \$90
- FIRST Tech Challenge: \$200
- FIRST Robotics Competition: \$290
- Alumni: \$20

For more information and enrollment forms, please visit <https://www.roboroos.org.au/contact/>



HOPPING INTO ENGINEERING



Who are the RoboRoos?

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

SPONSOR RECOGNITION

The Club works with every sponsor and supporter to understand their motivations, expectations and desired outcomes from supporting us, and we understand the need to meet those expectations. We have a number of ways of physically and digitally recognizing support. We are happy to discuss other means of recognition (including anonymous donations) on a case by case basis.

SPONSORS - THANK YOU

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